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Prosecuting environmental harm before the International Criminal Court

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I. OVERVIEW OF PROSECUTING ENVIRONMENTAL HARM BEFORE THE INTERNATIONAL CRIMINAL COURT

A. Introduction

In the seventeenth century, the eminent international law publicist Hugo Grotius recalled the maxim that “if trees could speak, they would cry out that since they are not the cause of war it is wrong for them to bear its penalties”.¹ In the intervening centuries, anthropogenic harm to the environment has continued to occur, rising to potentially cataclysmic levels. Scientists have described the current era as “the sixth mass extinction” and “biological annihilation”, at the same time warning that the anthropogenic extirpation and decimation of living species is even worse than previously thought.² This harm to the environment is inflicted by various means including deforestation, poaching, toxic dumping, fracking, unregulated mineral extraction, forest fires, military conflicts, carbon dioxide emissions, and myriad other sources. While it is increasingly documented and publicized, it has not been adequately addressed at the international level.

Environmental destruction is an all too foreseeable occurrence during times of societal upheaval, particularly during armed conflict. In violent circumstances, environmental protections are quickly forgotten as warring factions, profit-seeking corporations, and unscrupulous individuals scramble to control and exploit the natural environment, or even deliberately harm it for strategic purposes. Regulatory bodies that should be protecting the environment are either non-existent or non-functional, leaving environmental protections unenforced.³ The vicious cycle of environmental destruction and armed conflict can be self-

¹ Hugo Grotius, *On the Law of War and Peace* (1646) (Francis W Kelsey trans, William S. Hein & Co., 1995), p.747 (under the heading “Concerning Moderation in regard to the spoiling the Country of our Enemies, and such other Things”, Grotius attributes this to Josephus); cited in John Cohan, “Modes of Warfare and Evolving Standards of Environmental Protection Under the International Law of War”, 15 *Fla. J. Int’l L.* 481 (2002-2003) (“Cohan (2002)”), p.500.

² Gerardo Ceballos, Paul R. Ehrlich, and Rodolfo Dirzo, “Biological annihilation via the ongoing sixth mass extinction signaled by vertebrate population losses and declines”, *Proceedings of the National Academy of Sciences of the United States of America*, May 2017, p.1.

³ See United Nations Office of Drugs and Crime, *Wildlife and Forest Crime Analytic Toolkit*, 2012 (“UNODC Toolkit (2012)”), p.3. United Nations Environment Program, *Environmental Issues in Areas Retaken from ISIL Mosul, Iraq Rapid Scoping Mission July - August 2017*, p.4 (“UNEP (2017)”) (noting that in Iraq once ISIS took control of areas, environmental bodies and training were discontinued: e.g. “Niniveh Environment Directorate was immediately disbanded by ISIL and its offices, laboratories and assets confiscated. Ordered not to return to work, its 140 staff were jobless for three years.”).

perpetuating,⁴ “particularly in countries where laws and institutions have been weakened or have collapsed”.⁵

The harmful effects of armed conflict on the environment are well documented.⁶ While the history of harm to the environment stretches back millennia,⁷ the issue was thrust to the forefront of public consciousness with the use of environmental destruction as a war tactic in the form of large-scale chemical defoliation operations (using Agent Orange) by America during the Vietnam War in the 1960s and 1970s.⁸ During the Iran-Iraq war in the 1980s, hundreds of oil tankers were attacked on both sides, releasing over two million tonnes of oil into the sea.⁹ Environmental harm returned to the limelight during the first Gulf War in 1991, when Saddam Hussein ordered the Iraqi army to ignite Kuwait’s oil wells.¹⁰ Over two decades

⁴ See United Nations Security Council Resolution 1856 recognised this connection, stating that “the link between the illegal exploitation of natural resources, the illicit trade in such resources and the proliferation and trafficking of arms as one of the major factors fuelling and exacerbating conflicts in the Great Lakes region of Africa, and in particular in the Democratic Republic of Congo.”; UNSC Resolution 1856, S/RES/1856 (2008), 22 December 2008, p.2. See further UN Environment Programme, *Sudan post-conflict environmental assessment*, (UNEP, Geneva), 2007 (noting that in Darfur the variability of the regional climate, water scarcity, and the reduction of fertile land have been, along with other factors, important underlying factors of the armed conflict).

⁵ UNEP Study (2009), p.3-4, 8. See also Daniëlla Dam-de Jong, *International law and governance of natural resources in conflict and post-conflict situations*, Cambridge University Press (2015) (“Dam-de Jong (2015)”), pp.2-3, 200.

⁶ In 1992, the United Nations General Assembly recognised the dangers of armed conflict for the environment, stating that “the use of certain means and methods of warfare may have dire effects on the environment”, United Nations General Assembly Resolution on the Protection of the Environment in Times of Armed Conflict, A/RES/47/37, 25 November 1992. In 2009, after studying the impact of armed conflict on the environment, the United Nations Environment Program has concluded that “armed conflicts have continued to cause significant damage to the environment – directly, indirectly and as a result of a lack of governance and institutional collapse.”; United Nations Environment Program, *Protecting the Environment During Armed Conflict, An Inventory and Analysis of International Law*, 2009 (“UNEP Study (2009)”), p.8.

⁷ For example, both the Bible and teachings related to the Koran contain references to environmental destruction conducted in connection with armed conflict: See *Bible*, Revised Standard Version, Old Testament (“Bible RSV”), 2 Kings 3:24-25 (“...the Israelites rose and attacked the Moabites...And they overthrew the cities, and on every good piece of land every man threw a stone until it was covered; they stopped every spring of water, and felled all the good trees till only its stones were left in Kir-har’eseth, and the slingers surrounded and conquered it.”); See Yousuf Aboul-Enein and Sherifa Zuhur, *Islamic Rulings on Warfare*, Strategic Studies Institute, US Army War College (Diane Publishing Co.: Darby Pennsylvania, 2004), p.22 (citing the following passage from Islamic teachings “[s]top, O people, that I may give you ten rules for your guidance in the battlefield. Do not commit treachery or deviate from the right path. You must not mutilate dead bodies. Neither kill a child, nor a woman, nor an aged man. Bring no harm to the trees, nor burn them with fire, especially those which are fruitful. Slay not any of the enemy’s flock, save for your food. You are likely to pass by people who have devoted their lives to monastic services; leave them alone.”).

⁸ Ines Peterson, “The Natural Environment in Times of Armed Conflict: A Concern for International War Crimes Law?”, *Leiden Journal of International Law*, 22 (2009) (“Peterson (2009)”), p.325; Yoram Dinstein, Protection of the Environment in International Armed Conflict, 5 *Max Planck Y.B. U.N. L.* 523 2001 (“Dinstein (2001)”), p.538.

⁹ Dinstein (2001), p.524, footnote 3.

¹⁰ Peterson (2009), p.342; Michael Schmitt, “Green War: An Assessment of the Environmental Law of International Armed Conflict”, 22 *Yale J. Int’l L.* 1 (1997), pp.19, 75. Sylvia Earle, “Persian Gulf Pollution: Assessing the Damage One Year Later”, *Nat’l Geographic*, February 1992, p.122, cited in Schmitt (1997), p.19. See also Neil Popović, “Humanitarian Law, Protection of the Environment, and Human Rights”, 8 *Geo. Int’l Envtl L. Rev.* 67 (1995-1996) (“Popović (1995-1996)”), p.70.

later, reports emerged in 2016 that Islamic State or associated forces have engaged in similar scorched earth type tactics – setting oil wells, forests, and other locations on fire in Iraq, releasing a heavy volume of pollutants into the atmosphere.¹¹ Similarly, the phenomenon of illicit exploitation of natural resources has been linked to several armed conflicts, both as a cause of the fighting and as a means of continuing the fighting.¹² After conducting over twenty post-conflict environmental impact assessments since 1999, the United Nations Environment Programme (UNEP) has found that armed conflict causes significant harm to the environment and to communities that depend on natural resources.¹³

Environmentally destructive practices also occur outside of armed conflict. In 1992, the President of the UNSC concluded that “[t]he absence of war and military conflicts amongst States does not in itself ensure international peace and security. The non-military sources of instability in the economic, social, humanitarian and ecological fields have become threats to international peace and security.”¹⁴ Toxic dumping,¹⁵ wildlife exploitation,¹⁶ and other

¹¹ See United Nations Office for the Coordination of Humanitarian Affairs, situation report of 19 October 2016: Mosul Humanitarian Response Situation Report number 1 (17 – 19 October 2016) [EN/AR/KU] (“UNOCHA Iraq report 2016”) (noting that “In the rural areas south-east of Mosul, 19 oil wells have been set ablaze by retreating armed groups in the area south of Mosul, specifically around the town of Al Qayyarah. People arriving to Al Qayyarah seeking refuge face serious health risks. Burning crude oil produces a wide range of pollutants, including soot and gases.”); Eliana Cusato, ISIL’s Scorched Earth Policy in Iraq: Options for its Victims to be Recognised under International Law, 11 October 2017, (available at <http://www.trwn.org/isils-scorched-earth-policy-in-iraq-international-law/>) (“Cusato Scorched Earth”). See also Peter Schwartzstein, “The Islamic State’s Scorched-Earth Strategy”, *Foreign Policy*, 6 April 2016, <http://foreignpolicy.com/2016/04/06/the-islamic-states-scorched-earth-strategy/> (“Schwartzstein (2016)”).

¹² See, e.g., Daniëlla Dam-de Jong and James Stewart, “Illicit Exploitation of Natural Resources”, *The African Court of Human and Peoples’ Rights* (C Jalloh and K Clarke eds.) (2017) (“Dam-de Jong and Stewart (2017)”), pp.2-3 (“In armed conflicts in Angola, Sierra Leone, Côte d’Ivoire, the DR Congo and the Central African Republic, natural resources did not necessarily provide the sole means or motivations for armed violence, but they were at least one of several important causal factors that helped sustain bloodshed.”).

¹³ UNEP Study (2009), pp.3-4, 8.

¹⁴ Statement by the President of the United Nations Security Council (United Kingdom), 3046th meeting, 31 January 1992:

http://www.un.org/en/sc/repertoire/89-92/Chapter%208/GENERAL%20ISSUES/Item%2028_SC%20respons%20in%20maint%20IPS.pdf (last checked 22 December 2017). See also United Nations Press Release of 17 April 2007, SC/9000, “Security Council Holds First-Ever Debate on Impact of Climate Change on Peace, Security, Hearing over 50 Speakers” (noting statement of UNSC President (United Kingdom) concerning climate change and its implications – finding that it is a threat multiplier, including in relation to armed conflict: (available at <https://www.un.org/press/en/2007/sc9000.doc.htm>) (last checked 22 December 2017); Statement of United Nations Secretary-General Ban-Ki Moon, *Remarks to Security Council Debate on Water, Peace and Security*, 22 November 2016: <https://www.un.org/sg/en/content/sg/speeches/2016-11-22/remarks-security-council-debate-water-peace-and-security> (last checked 22 December 2017).

¹⁵ Skinnider, *Victims of Environmental Crime – Mapping the Issues* (2011), (“Skinnider (2011)”), p.30. Accusations have been submitted to the ICC that Chevron was responsible for toxic dumping and pollution in Ecuador from the 1960s through to the 1990s: Request to the Office of the Prosecutor of the ICC from the Legal Representatives of the Victims, “Communication: Situation in Ecuador”, 23 October 2014, available at chevrontoxico.com/assets/docs/2014-icc-complaint.pdf; N. Cely, ‘Balancing Profit and Environmental Sustainability in Ecuador: Lessons Learned from the Chevron Case’, (2014) 24 *Duke Environmental Law & Policy Forum* 353, at 354.

harmful practices are frequently perpetrated outside of armed conflict,¹⁷ particularly in circumstances of regulatory breakdown or collapse.¹⁸ Mégret argues that “[t]he devastation sown by some human activities under the cover of peace is occasionally far greater than that caused in war.”¹⁹

In light of these demonstrated forms of harm to the environment, as well as emerging new threats, environmental protection is one of the core goals and challenges facing the international community in the twenty-first century.²⁰ Environmental harm is a cross-sectoral problem, implicating several legal domains, conventional regimes, and enforcement mechanisms.²¹ International criminal law presents one potential means of addressing serious environmental harm, as part of a comprehensive approach also involving other non-penal frameworks. As a relatively new branch of international law, international criminal law seeks to deter harmful conduct by addressing large-scale atrocities and imposing “responsibilities directly on individuals and punishes violations through international mechanisms.”²² It focuses on the most serious crimes known to humanity, which tends to also be considered as *jus cogens*, such as the prohibitions of torture and genocide. Hence, a symbolic, or expressivist, function is served by condemning large-scale harm to the environment through criminal sanctions, as it signals the gravity of the international community’s opprobrium concerning such conduct.²³

¹⁶ European Union Action to Fight Environmental Crime, *The Illegal Wildlife Trade: A Case Study Report on the Illegal Wildlife Trade in the United Kingdom, Norway, Colombia and Brazil*, 2015 (“European Union Action to Fight Environmental Crime (2015)”), p.1.

¹⁷ Frédéric Mégret, “The Problem of an International Criminal Law of the Environment”, 36 *Colum. J. Envtl. L.* 195 (2011), pp.246-247.

¹⁸ Skinnider (2011), pp.27-28; UNODC Toolkit (2012), p.3.

¹⁹ Mégret (2011), pp.246-247.

²⁰ See, e.g., the Sustainable Development Goals, which set the global agenda in the lead up to 2030, and many of which directly or indirectly concern environmental protection; e.g. Goal 6 (clean water and sanitation); Goal 7 (affordable and clean energy); Goal 11 (sustainable cities and communities); Goal 12 (responsible consumption and production); Goal 13 (climate action); Goal 14 (life below water); Goal 15 (life on land).

²¹ Eliana Teresa Cusato, “Beyond Symbolism: Problems and Prospects with Prosecuting Environmental Destruction before the ICC”, *Journal of International Criminal Justice*, Volume 15, Issue 3, 1 July 2017, (“Cusato 2017”), 491–507, p.492.

²² Robert Cryer et. al., *An Introduction to International Criminal Law and Procedure*, 2nd ed., Cambridge University Press, 2010, (“Cryer et. al. (2010)”), p.3.

²³ See, e.g., United Nations Economic and Social Council, Resolution 1993/28, “The role of criminal law in the protection of the environment”, Annex: Conclusions of the Seminar on the Policy of Criminal Law in the Protection of Nature and the Environment in a European Perspective, held at Lauchhammer, Germany, from 25 to 29 April 1992, para.4 (“criminal law can have a general and special preventive effect and may, by its moral stigma, heighten environmental awareness”). Cusato (2017), text accompanying footnote 64 (referring to the expressivist function of using international institutions to prosecute environmental harm and citing M. Drumbl, *Accountability for Property Crimes and Environmental War Crimes: Prosecution, Litigation, and Development* (International Center for Transitional Justice, November 2009), at 21-22. Condemnation of environmental harm in international judgements will assist to counter-balance the traditional view of crimes against the environment

Further practical and conceptual reasons augur in favour of applying international criminal law to environmental harm. Environmentally harmful practices usually do not end at national borders.²⁴ Instead, environmental harm typically has cross-frontier ramifications and so lends itself to international solutions.²⁵ In relation to natural heritage sites, meaning those environmental features of outstanding universal value, the World Heritage Convention notes the sovereignty of the States on whose territory the heritage is situated, but also recognizes that “such heritage constitutes a world heritage for whose protection it is the duty of the international community as a whole to co-operate.”²⁶ The recognition of the “common concern of mankind” provides the conceptual basis for international criminal law to be applied to cases of serious environmental harm.²⁷ On a more practical note, international law provides a residual framework to address the *lacunae* in the regulatory coverage, particularly in locations with weak or non-existent/enforced regulatory regimes,²⁸ where “the odds of getting caught are extremely low, and the possibility of being convicted is virtually non-existent.”²⁹

Calls for the use of international criminal law to address serious environmental harm, which the United Nations is increasingly echoing,³⁰ will increase in quantity and urgency over the

as less serious than anthropocentric crimes, as epitomized by United Kingdom Viscount Dilhorne in his statements that pollution of a river is typical of “acts which “are not criminal in any real sense, but are acts which in the public interest are prohibited under a penalty.”; *Alphacell Ltd v Woodward* [1972] AC 824 (Opinion of Viscount Dilhorne).

²⁴ OHCHR Report Analytical Study on the Relationship between Human Rights and the Environment, A/ HRC/ 19/ 34, para.65 (“One country’s pollution can become another country’s environmental and human rights problem, particularly where the polluting media, like air and water, are capable of easily crossing boundaries.”); Philippe Sands, *Principles of International Environmental Law*, 2nd ed. (Cambridge University Press, 2003) (“Sands (2003)”), p.14 (“Many natural resources and their environmental components are ecologically shared. The use by one state of natural resources within its territory will invariably have consequences for the use of natural resources and their environmental components in another state.”).

²⁵ Tim Stephens, *International Courts and Environmental Protection*, (Cambridge University Press), 2009, p.54 citing Ian Brownlie, “A Survey of International Customary Rules of Environmental Protection”, (1973), 13 *Nat Res J* 179, 183. See also Mégret (2011), p.245.

²⁶ World Heritage Convention 1972, article 6.

²⁷ Mégret (2011), p.245.

²⁸ See Gregory Rose, *Following the Proceeds of Environmental Crime: Fish, Forests and Filthy Lucre*, Routledge (2014), (“Rose (2014)”), p.19 (noting that transnational environmental crime can erode good governance and the institutions of state). However, the lack of functioning authorities in areas suffering from serious conflict can also hamper international investigations; John Cooper et. al., “Wildlife crime scene investigation: techniques, tools and technology”, *Endangered Species Research*, (2009) (“Cooper et. al. (2009)”), p.5-6. This is particularly problematic given that the ICC lacks any deployable police force or military of its own and must largely rely on domestic authorities for cooperation in order to conduct its investigations; Schabas (2011), p.261.

²⁹ UNODC Toolkit (2012), p.3.

³⁰ See, e.g., United Nations General Assembly Resolution 69/314, A/RES/69/314, “Tackling illicit trafficking in wildlife”, 30 July 2015 (“illicit trafficking in protected species of wild fauna and flora is an increasingly sophisticated form of transnational organized crime...and therefore underlining the need to combat such crimes by strengthening international cooperation, capacity-building, criminal justice responses and law enforcement efforts.”).

coming years.³¹ The ICC Prosecution's 2016 guidelines on case selection state that it will prioritize cases involving significant harm to the environment, by giving "particular consideration to crimes that are committed by means of, or that result in, *inter alia*, the destruction of the environment, the illegal exploitation of natural resources or the illegal dispossession of land."³² In signaling a focus on both the destruction of the environment itself and the use of environmental destruction to perpetrate other crimes, the Prosecution's guidelines recognise the dual significance of the natural environment, both as a phenomenon of global value *per se* and as a potential vector for serious harm to human life and well-being. Against this backdrop, it is timely to examine the ICC's ability to redress environmental harm.

B. Research questions

This thesis examines the feasibility of prosecuting environmental harm under the Rome Statute and associated instruments that govern the jurisdiction and proceedings of the ICC. The assessment maps out the existing provisions and principles that could be used to prosecute environmental harm. At the same time, it identifies potential limitations inherent in the Court's governing instruments that could prejudice or undermine any attempt to prosecute environmental harm.

The central focus of the following analysis is on the ICC. As the only institution capable of applying international criminal with potentially unlimited geographic jurisdiction (*ratio loci*),³³ and potentially unlimited temporal jurisdiction from 1 July 2002 onwards, the ICC constitutes the most instructive framework to test the potential for prosecuting environmental harm under international law. The ICC also bears considerable potential for the prosecution of environmental harm due to its expansive reach over individuals; its modes of liability and

³¹ Rose (2014), p.16 ("growing attention to transnational environmental crime as a problem of legality and criminality, rather than just environmental management and non-compliance, confirms that this is one of the fastest growing areas of criminal endeavour.").

³² ICC, Office of the Prosecutor's Policy Paper on Case Selection and Prioritisation, 15 September 2016 ("OTP 2016 Case Selection Paper"), para.41. See also ICC, Office of the Prosecutor's Policy Paper on Preliminary Examinations, November 2013 ("OTP 2013 Preliminary Examination Policy Paper"), para.65 ("The impact of crimes may be assessed in light of, *inter alia*, the sufferings endured by the victims and their increased vulnerability; the terror subsequently instilled, or the social, economic and environmental damage inflicted on the affected communities.").

³³ Where the Security Council, acting under Chapter VII of the United Nations Charter, refers a situation to the ICC under article 13(b) of the Rome Statute, the usual geographic or personal jurisdictional link to a State Party is not required; meaning that the Court has potentially unlimited geographic reach in these circumstances: *Rome Statute of the International Criminal Court*, opened for signature 17 July 1998, 2187 UNTS 90 (entered into force 1 July 2002) ("Rome Statute"), article 13(b).

coverage of superior responsibility allow for proceedings against individuals who perpetrate or participate in serious crimes in a variety of ways including committing, ordering, inducing, soliciting, aiding and abetting, and otherwise contributing to criminal groups carrying out atrocities.³⁴

In exploring the potential use of the Rome Statute and associated instruments (collectively termed the Rome System herein) to adjudicate environmental harm, the study focuses on the following research questions:

- To what extent are the legal framework and provisions of the ICC, particularly the substantive crimes, jurisdictional parameters, rules of procedure and evidence, and law governing victim status and reparations, conceived anthropocentrically,³⁵ as opposed to eco-centrally?³⁶;
- Does the orientation of the Court's substantive and procedural framework and its framework for victim redress preclude or significantly prejudice proceedings for environmental harm? This is tested by analyzing whether the substantive and procedural framework of the ICC results in *adjudicative incoherence*³⁷ when applied to environmental crimes, particularly military attacks resulting in excessive environmental harm, toxic dumping and wildlife offences?

A note of caution is due at the outset. International criminal law is no panacea for the environmentally harmful practices occurring throughout many areas of the world. Given the resources available at the ICC, it will only ever be able to address a minute fraction of the crimes that potentially fall within its jurisdiction.³⁸ For this reason, the use of international criminal law proceedings should not be seen as a replacement for other measures and mechanisms established to address environmental harm, whether legal or political,³⁹ but

³⁴ William Schabas, *An Introduction to the International Criminal Court*, (4th ed., Cambridge University Press 2011) ("Schabas (2011)"), p.225.

³⁵ Anthropocentric, or human-centered, values, are those designed to minimize unnecessary human suffering; see Schmitt (1997), pp.6, 56, 62. See *Infra*, Chapter I.D on Definitional Underpinnings.

³⁶ Eco-centric values are those that see the environment as having an intrinsic value, irrespective of whether human beings suffer as a result of its destruction; See *for example* Eric Jensen, "The International Law of Environmental Warfare: Active and Passive Damage During Armed Conflict, 38 *Vand. J. Transnat'l L.* 145 (2005). See *infra*, Chapter I(D) on Definitional Underpinnings.

³⁷ See *infra*, Chapter I(C)(3) on Adjudicative Coherence.

³⁸ This framework is narrow and will inevitably fall short of addressing the "full panoply of issues implicated in most environmental disputes", particularly in light of the "polycentric" nature of environmental harm, involving "a web of competing values and interests"; See Stephens (2009), p.95 and citations therein.

³⁹ See Council of Europe, *Convention on the Protection of the Environment through Criminal Law*, ETS No. 172, 4 November 1998, Preamble ("Recognising that, whilst the prevention of the impairment of the

instead is tested here as a potential complementary mechanism, used to reinforce those other primary mechanisms under international law designed to protect the environment.⁴⁰

C. Approach

1. Sources of law

The use of international criminal law to address serious environmental harm is relatively untraversed territory. There is no specific or comprehensive regime that directly applies criminal sanctions to environmental harm under international law. Consequently, this analysis surveys the existing legal framework of the ICC for its applicability to environmental harm. Consistent with the approach within the ICC, the hierarchy of sources of law set out in article 21 of the Rome Statute is generally the framework for the assessment, albeit with complementary references to additional legal sources where relevant for illustrative purposes.⁴¹ The framework set out in article 21 applies to both substantive and procedural aspects of the Rome Statute and accompanying instruments such as the Rules of Procedure and Evidence.

In accordance with article 21(1)(a), the analysis looks first to the Rome Statute of the ICC, the Rules of Procedure and Evidence, and the Elements of Crimes.⁴² As part of the framework, it includes the Regulations of the Court, which are adopted by the Judges of the Court to govern its “routine functioning” pursuant to article 52 of the Statute.⁴³

environment must be achieved primarily through other measures, criminal law has an important part to play in protecting the environment.”); United Nations Economic and Social Council, Resolution 1993/28, “The role of criminal law in the protection of the environment”, Annex: Conclusions of the Seminar on the Policy of Criminal Law in the Protection of Nature and the Environment in a European Perspective, held at Lauchhammer, Germany, from 25 to 29 April 1992, para.3 (“In addition, criminal law should play a flanking and supporting and, where appropriate, independent role”).

⁴⁰ Danai Papadopoulou, “The Role of French Environmental Associations in Civil Liability for Environmental Harm: Courtesy of Erika”, *Journal of Environmental Law* 21:1 (2009), 87-112, p.95 (noting that environmental associations reported preferring the use of civil proceedings to criminal proceedings due to the more amenable standards and burdens in the civil jurisdiction.).

⁴¹ Rome Statute of the International Criminal Court, adopted on 17 July 1998 (entry into force: 1 July 2002), 2187 UNTS 90 (“Rome Statute”).

⁴² Rome Statute, article 21(1)(a). It should be noted that the Elements of Crimes are not binding, but instead designed to “assist the Court in the interpretation and application of articles 6 (genocide), 7 (crimes against humanity) and 8 (war crimes)”; Rome Statute, article 9. Given its specific focus on the Elements of Crimes, article 9 appears to be *lex specialis* as compared to article 21(1); Knut Dormann et. al., *Elements of Crimes under the Rome Statute of the International Criminal Court: Sources and Commentary*, Cambridge University Press (2004), p.8. See also Gilbert Bitti, “Chapter 18: Article 21 and the Hierarchy of Sources of Law before the ICC”, in Carsten Stahn, *The Law and Practice of the International Criminal Court*, (Oxford University Press, 2015) (“Stahn 2015”), p.411.

⁴³ Rome Statute, article 52. As to the significance of the Regulations, see Claus Kreß, ‘The Procedural Texts of the International Criminal Court’, (2007) 5 *Journal of International Criminal Justice*, p.537.

As a secondary source, the analysis looks to applicable treaties and rules and principles of international law, including customary international law.⁴⁴ This adheres to the approach mandated under article 21(1)(b) of the Rome Statute. Statutes and rules of other international courts and quasi-judicial bodies, as well as United Nations Security Council, and General Assembly resolutions, are discussed where relevant for the interpretation of the ICC's instruments and customary international law.⁴⁵

Article 21(1)(b) makes explicit reference to the law of armed conflict.⁴⁶ The law of armed conflict is also known as international humanitarian law, and the law of war, and consists of

“a set of rules which seek, for humanitarian reasons, to limit the effects of armed conflict. It protects persons who are not or are no longer participating in the hostilities and restricts the means and methods of warfare.”⁴⁷

In protecting non-combatants and restricting the means and methods of warfare, international humanitarian law also provides a measure of protection against environmental harm, both directly and indirectly.⁴⁸ In addition to the express prohibitions against environmental harm, the ICJ has confirmed that the underlying principles of necessity and proportionality require due regard for the environmental impact of military action, stating that “respect for the environment is one of the elements that go to assessing whether an action is in conformity with the principles of necessity and proportionality”.⁴⁹

⁴⁴ Customary international law can be described as binding principles based on general practice accepted as law amongst the actors in public international law. It consists of state practice and *opinio juris*, the latter of which refers to the “subjective” or “psychological” acceptance of a sense of legal obligation. See Statute of the International Court of Justice, Article 38; International Court of Justice, *The North Sea Continental Shelf Cases (Federal Republic of Germany v. Denmark; Federal Republic of Germany v. Netherlands)*, Judgment of 20 February 1969, I.C.J. Reports 1969, p. 4, para. 77 (“[n]ot only must the acts concerned amount to a settled practice, but they must also be such, or to be carried out in such a way, as to be evidence of a belief that this practice is rendered obligatory by the existence of a rule requiring it. The need for such a belief, i.e., the existence of a subjective element, is implicit in the very notion of *opinio juris sive necessitates*.”).

⁴⁵ Dam-de Jong (2015), section 4.2.2 (noting that “soft law processes play a major role in the development of rules in the field of international environmental law”).

⁴⁶ Rome Statute, article 21(1)(b). Other explicit mentions of international humanitarian law are included, for example, in the war crimes under articles 8(2)(a) and 8(2)(b) of the Statute, which refer to language from the Geneva Conventions, the laws and customs applicable in armed conflict, and “the established framework of international law”.

⁴⁷ ICRC, “What is International Humanitarian Law?”, https://www.icrc.org/eng/assets/files/other/what_is_ihl.pdf, July 2004 (last accessed August 2017).

⁴⁸ Sands (2003), p.313.

⁴⁹ *Advisory Opinion on the Legality of the Threat or Use of Nuclear Weapons*, 8 July 1996, I.C.J. Reports 1996, p. 242, para.30 (“States must take environmental considerations into account when assessing what is necessary and proportionate in pursuit of legitimate military objectives.”).

Articles 8(b) and (e) of the Rome Statute, in particular, confirm that international humanitarian law must be considered in the interpretation and application of the listed war crimes, as the introductory phrasing refers to the provisions falling “within the established framework of international law”.⁵⁰ International humanitarian law includes the Martens Clause, which provides that “in cases not included in the Regulations adopted by them, populations and belligerents remain under the protection and empire of the principles of international law, as they result from the usages established between civilized nations, from the laws of humanity and the requirements of the public conscience.”⁵¹ The Secretary-General has stated that the validity of this provision (in its original form), is “indisputable” in relation to environmental harm during armed conflict,⁵² and Sands has argued that there is no reason why environmental protections should be excluded from its scope.⁵³ Closely associated with international humanitarian law is the UN Convention on Certain Conventional Weapons of 1980, which brings together a number of treaties containing prohibitions of certain uses of conventional weapons. The Preamble of the Convention states that ‘it is prohibited to employ methods or means of warfare which are intended, or may be expected, to cause widespread, long- term and severe damage to the natural environment’.⁵⁴

Another body of law that is potentially applicable under the Rome Statute is international environmental law.⁵⁵ The express terms of article 21(1)(b) provide that the treaties and customary international law that make up international environmental law may be applied by the Court, provided that they are not inconsistent with the Statute. However, given that the substantive prohibitions within the Court’s jurisdiction are limited to genocide, crimes against humanity, war crimes, and aggression,⁵⁶ the Court could not simply pick prohibitions under environmental law and directly apply them. Instead, international environmental law will be used to interpret the substantive and procedural provisions in the Court’s own instruments.⁵⁷ For example, the precautionary principle, which is set out *inter alia* in the *Rio Declaration*, at

⁵⁰ Rome Statute, article 8(b) and (e).

⁵¹ See Hague Convention of 1899, Preamble; Hague Convention IV of 1907, Preamble; Additional Protocol I of 1977, article 1; Additional Protocol II of 1977, Preamble.

⁵² Report of the Secretary-General on the Protection of the Environment in Times of Armed Conflict, *UN General Assembly Document A/48/269* of 29 July 1993 (“Secretary-General Report 1993”), p.15.

⁵³ Sands (2003), p.311.

⁵⁴ Convention on Prohibitions or Restrictions on the Use of Certain Conventional Weapons Which May be Deemed to be Excessively Injurious or to Have Indiscriminate Effects, 10 October 1980 (‘Conventional Weapons Convention’).

⁵⁵ See generally Sands (2003).

⁵⁶ Rome Statute article 5.

⁵⁷ See, e.g., Mark Drumbl, “Waging War Against the World: The Need to Move from War Crimes to Environmental Crimes”, 22 *Fordham Int’l L. J.* 122 (1998-1999) (“Drumbl (1998-1999)”), pp.139-140 (listing environmental treaties that it will be “important” to “draw” into any environmental war crimes trial).

principle 15, directs that “where there are threats of serious or irreversible damage, lack of full scientific certainty shall not be used as a reason for postponing cost-effective measures to prevent environmental degradation.”⁵⁸ The potential application of the precautionary principle during ICC proceedings is discussed herein, particularly in the chapter on jurisdiction and procedure.⁵⁹

Importantly, obligations under international environmental treaties are not automatically suspended when armed conflict breaks out. Instead, the International Law Commission’s Draft articles on the effects of armed conflicts on treaties provide a presumption in favour of the continued applicability of environmental obligations, as demonstrated by the inclusion of “Treaties relating to the international protection of the environment” in the indicative annex of treaties that generally remain in operation during armed conflict under article 7.⁶⁰ Reconciling the terms and interpretation of the relevant provisions with other widely accepted instruments of international law is advisable. It reduces the risk of a fragmentation of international law and corresponding loss of respect for this body of law. Already the deleterious potential of multiple legal standards applying to the same issue at the international level has been raised, particularly in relation to the issue of state control over non-State armed groups.⁶¹

As well as being directly applicable under article 21(1)(b) of the Rome Statute, the rules and principles of international law are also relevant to the interpretation of the Rome Statute and related instruments, in accordance with article 31(3) of the Vienna Convention on the Law of Treaties, which has been applied by several trial chambers and the appeals chamber,⁶² and which provides that “any relevant rules of international law applicable in the relations

⁵⁸ Rio Declaration on Environment and Development, 13 June 1992, UN Doc. A/CONF.151/26, Vol. I (“Rio Declaration”), article 15.

⁵⁹ See below Chapter III on the Jurisdiction and Procedure.

⁶⁰ International Law Commission, Draft Articles on the Effects of Armed Conflicts on Treaties (2011), Annex - Indicative list of treaties referred to in article 7 (“The effect of such an indicative list is to create a set of rebuttable presumptions based on the subject matter of those treaties: the subject matter of the treaty implies that the treaty survives an armed conflict.”).

⁶¹ See Gideon Boas, James Bischoff, and Natalie Reid, *International Criminal Law Practitioner, Volume II: Elements of Crimes under International Law* (Cambridge University Press, 2008) (“Boas et. al. (2008)”), pp.245-247.

⁶² See, e.g., *Katanga* article 74 Decision, para.47 (relying on the Vienna Convention on the Law of Treaties of 1969 along with article 21 of the Rome Statute for its approach to the applicable law); *Prosecutor v. Thomas Lubanga Dyilo*, ICC-01/04-01/06 A5, Judgment on the appeal of Mr Thomas Lubanga Dyilo against his conviction, 1 December 2014 (“*Lubanga* Appeal Judgment”), para.277 (relying on Vienna Convention on the Law of Treaties of 1969 to interpret war crimes provisions); *The Prosecutor v. Jean-Pierre Bemba Gombo*, ICC-01/05-01/08-3343, Judgment pursuant to Article 74 of the Statute, 21 March 2016, (“*Bemba* article 74 Decision”), para.70; Situation in the Democratic Republic of the Congo, Judgment on the Prosecutor’s Application for Extraordinary Review of Pre-Trial Chamber I’s 31 March 2006 Decision Denying Leave to Appeal”, ICC-01/04-168, 13 July 2006, para. 33.

between the parties” should be taken into account, along with the context of the treaty for its interpretation.⁶³ The preparatory work of the Rome Statute and associated instruments and the circumstances of their conclusion are also relevant as subsidiary means of interpretation, where the primary means “leave the meaning ambiguous or obscure; or leads to a result which is manifestly absurd or unreasonable”.⁶⁴

Jurisprudence arising from ICC cases is cited where relevant, in accordance with article 21(2) of the Rome Statute.⁶⁵ Jurisprudence from other international tribunals is referred to where relevant to determine the specific contents of relevant treaty and customary international law under article 21(1)(b), as well as general principles of law under article 21(1)(c).⁶⁶ The Trial Chamber in *Katanga* noted that the jurisprudence of the *ad hoc* tribunals may be used to identify the content of relevant treaty law, customary international law, and general principles of law, though the *ad hoc* tribunals’ interpretations are not binding on the ICC.⁶⁷ The jurisprudence of the *ad hoc* tribunals is particularly apposite vis-à-vis the law of armed conflict,⁶⁸ which has been addressed in detail before the International Criminal Tribunal for the former Yugoslavia, and genocide, which has been addressed in detail at both *ad hoc* tribunals. The provisions governing crimes against humanity differ in some significant respects between the ICC and the *ad hoc* tribunals, most notably in the policy requirement under the Rome Statute, which is not required at the *ad hoc* tribunals.⁶⁹ But these established bodies of jurisprudence nonetheless generally provide a useful guide to for the application of the underlying crimes against humanity in the Rome Statute.

Domestic laws and jurisprudence from national courts are cited where provided for under article 21(1)(c), in order to demonstrate general principles of law derived from national systems.⁷⁰ In this vein, aspects of domestic law that could be classified as transnational law

⁶³ Vienna Convention on the Law of Treaties, 1155 U.N.T.S. 331, article 31(3).

⁶⁴ *Katanga* article 74 Decision, para.49 citing Vienna Convention on the Law of Treaties of 1969, article 32.

⁶⁵ See Rome Statute, article 21(2).

⁶⁶ See Volker Nerlich, “The status of ICTY and ICTR precedent in proceedings before the ICC”, in Carsten Stahn and Goran Sluiter, eds., *The Emerging Practice of the International Criminal Court*, (Martinus Nijhoff, 2009) (“Stahn and Sluiter (2009)”), p.305-325.

⁶⁷ *Prosecutor v. Germaine Katanga*, Decision Pursuant to Article 74, ICC-01/04-01/07, 7 March 2014, (“*Katanga* article 74 Decision”), para.47. See also *Bemba* article 74 Decision, para.78.

⁶⁸ The primary sources of the law of armed conflict that are referenced herein are The 1899 and 1907 Hague Regulations, the four Geneva Conventions of 1949, and the two Additional Protocols to the Geneva Conventions of 1977.

⁶⁹ See Rome Statute, article 7(2)(a).

⁷⁰ See in this respect article 21 of the Rome Statute, which permits recourse to “In the second place, where appropriate, applicable treaties and the principles and rules of international law, including the established principles of the international law of armed conflict” and “general principles of law derived by the Court from

are highlighted when relevant.⁷¹ Article 21(1)(c) explicitly refers to general principles of law from the States that would normally exercise jurisdiction over the crime or crimes in question. In relation to environmental harm, this prioritization of principles of law from particular national states, albeit as a tertiary source of guiding law, may introduce a measure of variation in the applicable legal principles. For example, if environmental harm occurs in national territory with extensive and highly developed rules and jurisprudence on environmental offences the specific laws applicable by virtue of article 21(1)(c) would in theory be more exacting than if the harm occurred in a country with rudimentary or non-existent environmental protections.

Additionally, there are some references to national rules, jurisprudence, or practice which do not necessarily fit into the categories of guiding law set out in article 21 of the Rome Statute. This material is included for illustrative purposes in order to demonstrate legal approaches taken in other jurisdictions that may inform the ICC's interpretation of its legal framework and its practices.⁷² In this respect, it is notable that the ICC judiciary makes reference on occasion to domestic laws and jurisprudence.⁷³ Domestic law may also assist to identify possible amendments to the Statute, Rules or other instruments, or simply through its practices.

In keeping with the Rome Statute's requirement that "the application and interpretation of the law [before the ICC] must be consistent with internationally recognized human rights",⁷⁴

national laws of legal systems of the world including, as appropriate, the national laws of States that would normally exercise jurisdiction over the crime", as applicable sources of law.

⁷¹ Transnational law is described by as Cryer et. al. as follows: "Transnational criminal law includes the rules of national jurisdiction under which a State may enact and enforce its own criminal law where there is some transnational aspect of a crime. It also covers methods of cooperation among States to deal with domestic offences and offenders where there is a foreign element and the treaties which have been concluded to establish and encourage this inter-State cooperation."; Cryer et. al. (2010), p.6.

⁷² Sands (2003), pp.11, 895-896.

⁷³ See, e.g., *Lubanga* Appeal Judgment, para.470 (rejecting claim that it was applying domestic law directly in applying article 25(3)(a) and stating "the Appeals Chamber considers it appropriate to seek guidance from approaches developed in other jurisdictions in order to reach a coherent and persuasive interpretation of the Court's legal texts. This Court is not administering justice in a vacuum, but, in applying the law, needs to be aware of and can relate to concepts and ideas found in domestic jurisdictions."); *Prosecutor v. Germaine Katanga*, Order for Reparations pursuant to Article 75 of the Statute, ICC-01/04-01/07, 24 March 2017, fn.102 (referring to "By way of example, see the practice of the Chilean Commission on Political Imprisonment and Torture (Lisa Magarrell, "Reparations in Theory and Practice" in International Centre for Transitional Justice, Reparative Justice Series (2007), p. 8) and the practice of the Truth and Reconciliation Commission in Peru (Reglamento de inscripción en el Registro Único de Víctimas de la Violencia a cargo del Consejo de Reparaciones, article VI), and fn.231 referring to High Risk Tribunal A of Guatemala in the Sepur Zarco case (High Risk Tribunal A, Sepur Zarco case, Judgment C-01076-2012-00021 Of. 2, 26 February 2016, p. 5), para.230 ("The Chamber has reviewed the practice of France and Belgium in that regard, and that of the military courts in the DRC, the United Nations Compensation Commission and the Inter-American Court.")).

⁷⁴ Rome Statute, article 21(3).

major international human rights instruments such as the Universal Declaration of Human Rights of 1948, the International Covenant on Civil and Political Rights of 1966, and the International Covenant on Economic, Social and Cultural Rights of 1996, are referenced where relevant. International human rights standards are relevant both substantially in determining the parameters of crimes,⁷⁵ and procedurally in determining the manner of conducting the cases before the Court.⁷⁶

2. Structure of this study

The study is divided into this overview, then three substantive chapters, and a final concluding chapter. Chapter Two focuses on the substantive prohibitions falling within the jurisdiction of the Rome Statute of the ICC, known as its jurisdiction *rationae materiae*. It assesses which of those provisions may be used to address serious environmental harm, either directly or indirectly. Chapter Three focuses on the ICC's jurisdictional and procedural parameters, examining the issues that arise when the rules governing its proceedings are applied to cases of environmental harm. Chapter Four focuses on the status of victims before the ICC, as well as mechanisms for victims' reparations, and assesses how environmental harm fits under this victims' regime.

At the core of the analysis are two key theoretical perspectives – anthropocentrism and eco-centrism.⁷⁷ These perspectives are explained and used to highlight issues arising in connection with prosecuting environmental damage at the international level. Historic examples of environmental damage are analysed in order to show the issues likely to arise in connection with the prosecution of similar acts. The analysis assesses the extent to which the Rome Statute exhibits a bias towards anthropocentrically framed charges and the feasibility of adjudicating environmental harm before the Court.

3. Adjudicative coherence

To test the efficacy of the rules for the adjudication of environmental harm, a conceptual test of *adjudicative coherence* is used. The adjudicative coherence test examines whether the

⁷⁵ See the discussion of the crime against humanity of persecution under article 7(1)(h) and (2)(g), which centers on the denial of “fundamental rights contrary to international law”.

⁷⁶ See, e.g., the discussion of the exclusion of evidence under article 69(7) of the Rome Statute, which provides a basis to exclude evidence obtained by means of a violation of the Rome Statute or internationally recognized human rights and the violation casts substantial doubt on the reliability of the evidence or else means that the admission of the evidence would seriously damage the integrity of the proceedings; *infra* Chapter III(C)(2)(a)(iv).

⁷⁷ See *Infra*, Chapter I(D) on Definitional Underpinnings.

specific ICC rules and procedures, when viewed in their context and applied to possible scenarios involving environmental harm, would result in an incoherent judicial process, which would see the feasibility of the proceedings seriously impaired or jeopardized. The adjudicative coherence test is unique to this study and novel.⁷⁸ It provides a feasible analytical tool for assessing legal frameworks, particularly in circumstances such as the present where there are no data pools of easily comparable procedures.

The international criminal trial as an adjudicative process involves the balancing of several factors, including the investigation and presentation of inculpatory and exculpatory evidence,⁷⁹ respect for fair trial rights of the accused and the protection of victims and witnesses,⁸⁰ the maintenance of efficient, expeditious and cost-effective proceedings,⁸¹ and the entering of a well-reasoned verdict and sentence.⁸² This means that an initial assessment can be made of the likely functionality or coherence of a legal framework in the abstract, at least in so far as pending problems may be evident due to clashes or contradictions in the applicable principles and rules affecting these core requirements for an international criminal procedure. Essentially, if the application of the rule would mean that any of the core factors identified above would be compromised *ab initio*, due to the nature of the phenomenon being

⁷⁸ A broadly analogous approach was implicitly signalled by Patrick Robinson in “Ensuring Fair and Expeditious Trials at the International Criminal Tribunal for the former Yugoslavia”, *EJIL* (2000), pp.569-589, at 573 (“the Statute and the Rules should be seen as establishing a legal system that is self-contained and comprehensive, and capable of providing answers to any question that arises in the work of the Tribunal. This does not mean that it is not appropriate to examine domestic criminal law jurisdictions for purposes of comparison. But that comparative exercise must be completed by testing the solution it provides against the Tribunal system itself. Where the Statute and the Rules do not provide an answer in explicit terms, the testing is done by measuring the solution yielded by comparative analysis against the context in which the Tribunal operates and its object and purpose. The test is whether the solution is consistent with a fair and expeditious trial of persons charged with the most serious violations of international humanitarian law.”).

⁷⁹ See, e.g., Rome Statute, article 54(1)(a) (“The Prosecutor shall... investigate incriminating and exonerating circumstances equally.”).

⁸⁰ See, e.g., Rome Statute, article 64(2) (“The Trial Chamber shall ensure that a trial is fair and expeditious and is conducted with full respect for the rights of the accused and due regard for the protection of victims and witnesses.”); article 67 (setting out the accused’s fair trial rights).

⁸¹ Rome Statute, article 64(2); International Bar Association, *Enhancing efficiency and effectiveness of ICC proceedings: a work in progress*, January 2011, p.8 (“Given the importance of this issue to the credibility and legitimacy of the Court, this ninth IBA/ ICC Monitoring Report will discuss steps that the ICC has taken to enhance its efficiency and maximise its effectiveness, and consider what challenges remain.”); See International Bar Association, *Evidence Matters in ICC Trials*, August 2016, p.13 (“Efficiency is, first, a goal of the criminal process as an aspect of the right of the accused to be tried without undue delay, guaranteed by Rome Statute Article 67(1)(c), and as a consideration for victims’ right to prompt access to justice and reparations before the ICC... Beyond the criminal process, efficiency is also an issue of institutional management. The Court has limited resources to respond to the varying needs and demands it faces, and the number of cases and situations that it will be able to address will, in part, depend on how efficiently it conducts legal proceedings.”).

⁸² See, e.g., Rome Statute, article 74(5) (“The decision shall be in writing and shall contain a full and reasoned statement of the Trial Chamber’s findings on the evidence and conclusions.”); article 76(1) (“In the event of a conviction, the Trial Chamber shall consider the appropriate sentence to be imposed and shall take into account the evidence presented and submissions made during the trial that are relevant to the sentence.”).

tried, or the combination of these factors would be rendered impossible in relation to the type of offence being examined, then the legal framework would exhibit incoherence.

A postulated example demonstrates the adjudicative coherence analysis approach: if it were necessary under international criminal law to produce a body before murder charges would be entertained, then in many instances it would become unfeasible to have a trial without undue delay, as it often takes years for bodies, including those in mass graves, to be discovered and exhumed.⁸³ Consequently, the requirement to produce a body would result in adjudicative incoherence. It is for this reason that international courts have resisted imposing a requirement of producing a body in order to submit or prove murder charges.⁸⁴ An additional illustrative hypothetical example would be if a rule provided that an accused had the right of appeal and the right to free legal representation if indigent (as reflected in all major human rights instruments), but the provisions on legal aid only covered the trial proceedings. The incoherent mix of rules would demonstrate *ab initio* a significant problem for the conduct of proceedings or render them meaningless.

The adjudicative coherence test is an analytical tool that is conceptually distinct from the issue of whether the relevant framework is conceived of anthropocentrically or eco-centrally.⁸⁵ Whereas the anthropocentric vs eco-centric orientation issue concerns the character of the rules, provisions, and goals of international criminal law, the adjudicative coherence test concerns the functionality of this legal framework when applied to an area of human activity – in this case, environmental harm. Despite the different functions of these concepts, there is a relationship between them. The adjudicative coherence test provides insight into the character of the legal framework, which informs and substantiates the analysis of the nature of its character.

4. Three paradigmatic forms of harm to the environment

To examine the extent of the anthropocentric nature of the ICC's framework and to test adjudicative coherence of prosecuting environmental harm thereunder, it is illustrative to

⁸³ For example, in relation to the crimes committed during the 1990s in Bosnia, the bodies in the Tomasica mass grave were only found years later than the other mass graves containing bodies from the 1990s war and associated crimes; see *Prosecutor v. Ratko Mladić*, Case No. IT-09-92-T, Decision on Prosecution Motion to Re-Open its Case-in-Chief, 23 October 2014, para.9.

⁸⁴ See e.g., *Prosecutor v. Milan Lukić & Sredoje Lukić*, Case No. IT-98-32/1-A, App.Ch., Judgement, 4 December 2012.

⁸⁵ For detailed discussion of the anthropocentric or eco-centric concepts See *Infra*, Chapter I(D) on Definitional Underpinnings.

provide a concrete analysis of examples of environmental harm. In order to maintain a holistic approach, both substantive and procedural rules in the governing instruments and jurisprudence should be applied to the examples.

Human beings can cause serious harm to the environment in a multitude of ways. For example, UNEP notes that offences against the environment may encompass a range of persons and conduct, including “criminals who pollute the air, water and land and push commercially valuable wildlife species closer to extinction; it can also cover crimes that speed up climate change, destroy fish stocks, decimate forests and exhaust essential natural resources.”⁸⁶ Moreover, the means by which humans may harm the environment are constantly evolving and proliferating.⁸⁷ An exhaustive approach seeking to identify and analyse all possible forms of environmental harm is not feasible or practicable within the ambit of this study. Instead, an illustrative approach is taken, whereby three paradigmatic types of environmental destruction are highlighted in order to explore the framework and practicalities of prosecuting environmental harm under international criminal law.

The three types of environmental harm addressed herein are: attacks anticipated to cause excessive harm to the environment during armed conflict,⁸⁸ toxic dumping,⁸⁹ and wildlife exploitation.⁹⁰ These are three types of environmental harm that frequently have cross-border impact and frequently involve the exploitation of areas or situations with weak or non-existent domestic regulatory systems.⁹¹ These three types cover a broad spectrum of circumstances, with military attacks being inherently linked to armed conflicts, but toxic dumping and wildlife exploitation being possible inside and outside of armed conflict. They also impact on

⁸⁶ Conference of the Parties to the Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and Their Disposal, *Instruction manual for the legal profession on the prosecution of illegal traffic*, UNEP/CHW.10/12/Add.1, 9 November 2011, para.7 (“Instruction Manual on Illegal Traffic”).

⁸⁷ See Declaration of the United Nations Conference on the Human Environment (Stockholm Declaration), 16 June 1972, UN Doc. A/CONF.48/14/Rev. 1 (1973) (Preamble: “in the long and tortuous evolution of the human race on this planet a stage has been reached when, through the rapid acceleration of science and technology, man has acquired the power to transform his environment in countless ways and on an unprecedented scale.”).

⁸⁸ This form of environmental harm could also be called “attacks anticipated to cause disproportionate harm to the environment during armed conflict”, as the principle of proportionality defined in article 51(5)(b) of Additional Protocol I hinges on the harm being “excessive” (the provision proscribes “an attack which may be expected to cause incidental loss of civilian life, injury to civilians, damage to civilian objects, or a combination thereof, which would be excessive in relation to the concrete and direct military advantage anticipated.”).

⁸⁹ Eighth United Nations Congress on the Prevention of Crime and the Treatment of Offenders (Havana, Cuba, 1990), Resolution on “The role of criminal law in the protection of nature and the environment” (endorsed in General Assembly in Resolution 45/121, (14 December 1990) at para.3).

⁹⁰ UNGA Resolution 69/314.

⁹¹ As UNEP noted “exploitation and illegal trade of natural resources frequently fuel and prolong armed conflict, particularly in countries where laws and institutions have been weakened or have collapsed”; UNEP Study (2009), p.3-4, 8. See also Secretary-General Report 1993, p.11.

various types of potential victim entities, with military attacks and toxic dumping impacting humans, their property, and the environment *per se*, and wildlife exploitation primarily impacting on non-human animal and plant species. These three forms of environmental harm also vary in the extent to which they have been addressed by existing provisions and jurisprudence pursuant to international criminal law. Whereas attacks causing excessive harm to the environment during armed conflict are the subject of an express provision in the Rome Statute and are covered by multiple provisions in instruments of international humanitarian law, toxic dumping and wildlife offences are areas that are not expressly covered by the Rome Statute, and have primarily been dealt with as violations of domestic law.

Aside from these three forms of environmental harm, other activities that can damage the natural world include the unlawful extraction of minerals, metals and other natural resources, the improper disposal of waste in the oceans and in outer space, atmospheric pollution, and carbon emissions. These environmental threats have been extensively analysed under the rubric of international law elsewhere,⁹² and are not focused on in detail herein. Nonetheless, they are mentioned where relevant by analogy to one of the three forms of environmental harm addressed in this study.

(a) Attacks causing excessive harm to the environment during armed conflict

Military operations and attacks frequently cause serious harm to the environment. In 1992, the United Nations General Assembly recognised that warfare can seriously harm the environment and urged Member States to take all measures to ensure compliance with existing international law on the protection of the environment during armed conflict.⁹³ In 1993, the Secretary-General of the United Nations observed that “the principle of the individual criminal responsibility of the perpetrator of certain breaches of international law, including those bearing on the environment in times of armed conflict, as well as of the person ordering the commission of such acts, is of critical importance.”⁹⁴ While relatively few

⁹² For the unlawful extraction of minerals and metals see Dam-de Jong (2015), p.24 (“The primary focus of this book is therefore on those natural resources that are relatively easy to obtain but are highly profitable, such as timber, minerals and rare metals.”; p.217 “as soon as they have been extracted (*ex situ*), natural resources become tangible objects and therefore fall into the category of movable property. This means that the exploitation of natural resources is governed by the rules concerning immovable property, while the rules on movable property regulate the (il)legality of the appropriation of natural resources which have already been extracted”). For the redress of carbon emissions see United Nations Environment Program, *The Emissions Gap Report 2016: a UNEP Synthesis Report*, (November 2016).

⁹³ United Nations General Assembly Resolution on the Protection of the Environment in Times of Armed Conflict, A/RES/47/37, 25 November 1992.

⁹⁴ Secretary-General Report 1993, pp.9-10.

United Nations Security Council Resolutions directly addressed wartime damage to the environment, several touch on related issues, including reparations for environmental harm caused during armed conflict, targeting oil installations, and the exploitation of natural resources.⁹⁵

Armed conflict between organized groups has frequently resulted in serious environmental harm, and often fueled a vicious cycle of warfare and illegal resource exploitation.⁹⁶ For example, when Saddam Hussein ordered the Iraqi army to ignite over 600 Kuwaiti oil wells during the first Gulf War,⁹⁷ the ensuing fires burned a million tons of oil for several months.⁹⁸ This produced huge amounts of sulphur dioxide and carbon dioxide, and polluted the atmosphere as far away as the Himalayas.⁹⁹ Surface oil pools covered with falling soot combined with sand and gravel to form a layer of “tarcrete” covering almost five percent of Kuwait’s land area, threatening its fragile desert ecosystems.¹⁰⁰ Moreover, “heavy atmospheric pollution in Kuwait had adverse effects for a long time”.¹⁰¹ There is some indication that this attack was part of a military strategy, notwithstanding its profoundly deleterious impact on the environment,¹⁰² but any minor military impact that could have motivated it pales in comparison with the major ecological impact it unleashed, particularly as the Iraqi army was already retreating.¹⁰³

According to Iran, “Iraq’s detonation of oil wells in Kuwait resulted in the release of more than 760,000 tons of smoke into the atmosphere”, causing millions of people to inhale toxic chemicals.¹⁰⁴ The US reported that “a vast oil slick” of “at least 35 miles long and 10 miles wide” had been created in the northern Gulf due to the Iraqi forces opening oil pipelines and emptying oil tankers.¹⁰⁵ Similar reports of the damage were provided by the United Nations

⁹⁵ Marie G. Jacobsson, Special Rapporteur on Protection of the Environment during Armed Conflict, Second report, A/CN.4/685, 28 May 2015 (“Jacobsson (2015)”), paras. 83 and 84.

⁹⁶ Weinstein, p.700.

⁹⁷ Peterson (2009), p.342; Schmitt (1997), pp.19, 75.

⁹⁸ Dinstein (2001), p.543.

⁹⁹ Earle (1992) cited in Schmitt (1997), p.19. See also Popović (1995-1996), p.70.

¹⁰⁰ Five percent of Kuwait’s total land (approximately 17, 800 square kilometres) is approximately 850 square kilometres. See Robert Block “Kuwaiti Oil Wells” in Anthony Dworkin et al (eds.), *Crimes of War 2.0: What the Public Should Know*, (W.W. Norton & Co.; Washington, 2007).

¹⁰¹ Dinstein (2001), p.543.

¹⁰² Some commentators dispute whether even this egregious example of an environmentally deleterious attack would qualify under article 8(2)(b)(iv); see Peterson (2009), p.342; Schmitt (1997), pp.19, 75.

¹⁰³ Dinstein (2001), p.543.

¹⁰⁴ United Nations Compensation Commission Governing Council, *Report and Recommendations made by the Panel of Commissioners Concerning the First Instalment of “F4” Claims*, S/AC.26/2001/16, 22 June 2001, (“UNCC Recommendations First Instalment (2001)”), para.56.

¹⁰⁵ United States of America, *Letter dated 30 January 1991 to the President of the UN Security Council*, UN Doc. S/22173, 30 January 1991, pp.2–3.

Claims Commission, set up to address demands for damages arising from Iraq's invasion of Kuwait, which noted that even the effort to put out the fires created environmental harm.¹⁰⁶ These incidents were followed by the Secretary-General of the United Nations noting in 1993 that in the preceding years "certain conflicts had caused serious environmental damage due in particular to the large-scale and indiscriminate use of mines, the bombing and shelling of whole areas and attacks on oil-producing installations, resulting in severe pollution."¹⁰⁷

In 2016, new reports of oil well incendiarism in Iraq emerged – this time attributed to ISIS forces.¹⁰⁸ ISIS is reported to have set fire to sulphur stockpiles at the Al-Mishraq production plant in 2016, as well as lighting oil wells, storage tanks, and a refinery in the preceding months,¹⁰⁹ as well as burning Iraq's second largest low-land forest.¹¹⁰ A rapid scoping mission report from UNEP after Mosul was taken from ISIS in 2017 reported that the "18 oil wells set alight by ISIL in Qarrayah created such thick black smoke that locals refer to the darkened skies as the 'Daesh winter'".¹¹¹ Iraqi farmers, including Yazidis, have reported that along with pillaging farm equipment, ISIS forces have destroyed arable lands as they retreat.¹¹²

Another example of environmental harm potentially resulting from, or exacerbated by, military strikes is the 1999 bombing campaign undertaken by NATO against the Former Republic of Yugoslavia in response to events in Kosovo. NATO's bombing of military-industrial sites in Serbia caused significant environmental damage.¹¹³ A Committee from the Office of the Prosecutor of the ICTY examined the applicability of articles 35(3) and 55(1) of Additional Protocol 1 to the Geneva Conventions to the NATO actions during its bombing campaign, ultimately concluding that the environmental destruction was not sufficiently

¹⁰⁶ United Nations Claims Commission, *Post-Conflict Environmental Restoration: The UNCC Follow-Up Programme For Environmental Awards*, 2012, p.10. See also UNCC Explanatory Text: <http://www.uncc.ch/follow-programme-environmental-awards-0>.

¹⁰⁷ Secretary-General Report 1993, p.11.

¹⁰⁸ UNOCHA Iraq report 2016.

¹⁰⁹ UNEP (2017), p.2; Cusato (2017).

¹¹⁰ Schwartzstein (2016).

¹¹¹ UNEP 2017, p.2.

¹¹² Schwartzstein (2016).

¹¹³ See International Criminal Tribunal for the former Yugoslavia Office of the Prosecutor, *Final Report to the Prosecutor by the Committee Established to Review the NATO Bombing Campaign Against the Federal Republic of Yugoslavia*, 2000 ("Final Report on NATO (2000)"), available at <http://www.icty.org/sid/7846> (last accessed 4 October 2016). See also International Criminal Tribunal for the former Yugoslavia, *Office of the Prosecutor Press Release, Prosecutor's Report on the NATO Bombing Campaign*, 13 June 2000, PR/ P.I.S./ 510-e ("Press Release on Final Report on NATO (2000)"). Views on the final recommendations of the report are mixed. See, e.g., Paolo Benvenuti, "The ICTY Prosecutor and the Review of the NATO Bombing Campaign against the Federal Republic of Yugoslavia", *European Journal of International Law*, 12(3):503-530 (2001).

severe to be prosecuted, despite other findings that NATO's bombing of military-industrial sites in Serbia caused significant environmental damage.¹¹⁴

Military strikes have resulted in significant harm to the environment in other contexts. For example, when studying the effects of armed conflict on the environment, UNEP noted that "an estimated 12,000 to 15,000 tons of fuel oil were released into the Mediterranean Sea following the bombing of the Jiyeh power station during the conflict between Israel and Lebanon in 2006."¹¹⁵ "the need to protect and preserve the marine environment in accordance with international law."¹¹⁶ In 2009, the United Nations General Assembly issued Resolution 63/211 addressing the oil slick caused by the bombing of the El-Jiyeh power plant in Lebanon during the 2006 war. Subsequently, United Nations General Assembly Resolution 69/212 on the same issue noted that "the oil slick has heavily polluted the shores of Lebanon and partially polluted Syrian shores and consequently has had serious implications for livelihoods and the economy of Lebanon, owing to the adverse implications for natural resources, biodiversity, fisheries and tourism, and for human health in the country".¹¹⁷ A 2014 United Nations Development Program study quantified the environmental damage caused by the oil spill off the coast of Lebanon at \$856.4 million.¹¹⁸

(b) Unlawful transboundary movement and storage of hazardous substances (toxic dumping)

The disposal of toxic waste in an improper manner is a noxious practice that is growing in prevalence and causes serious harm to the environment.¹¹⁹ It is typically motivated by economic concerns, as the proper disposal of toxic by-products and substances can be expensive and difficult.¹²⁰ Unlawful transboundary movement and storage of hazardous substances can occur both within and outside of the confines of armed conflict. These

¹¹⁴ See Final Report on NATO (2000), part IV(1).

¹¹⁵ UNEP Study (2009), p.8.

¹¹⁶ UNGA Resolution G/RES/N63/211 Oil slick on Lebanese shores, Preamble (10 February 2009) in United Nations General Assembly, A/63/PV.72, 72nd plenary meeting, 19 December 2008.

¹¹⁷ United Nations General Assembly resolution 69/212, A/RES/69/212, 19 December 2014, para. 3.

¹¹⁸ United Nations Development Programme, *Report on the Measurement and Quantification of the Environmental Damage of the Oil Spill on Lebanon*, July 2014, ("UNDP Study (2014)"), para. 44; Marie G. Jacobsson (Special Rapporteur on Protection of the Environment during Armed Conflict), *Third Report on the Protection of the Environment in relation to Armed Conflicts*, ILC Doc. A/CN.4/700, 3 June 2016, ("Jacobsson (2016)"), paras.79-83.

¹¹⁹ Europol, *Threat Assessment 2013 Environmental Crime in the EU*, November 2013, p.3 (available at file:///C:/Users/Matt/Downloads/4aenvironmental_crime_threatassessment_2013_-_public_version.pdf) (last checked 22 December 2017).

¹²⁰ Luigi Prosperi and Jacopo Terrosi, "Embracing the 'Human Factor': Is There New Impetus at the ICC for Conceiving and Prioritizing Intentional Environmental Harms as Crimes Against Humanity?", *Journal of International Criminal Justice*, Volume 15, Issue 3, 1 July 2017, Pages 509–525 ("Prosperieri and Terrosi (2017)"), p.513.

activities are frequently conducted in areas with weak regulatory enforcement, and negatively impact the natural environment, animals and humans: “the covert and illegal dumping of hazardous and toxic wastes results in poisonous pollution of water tables, river systems and local ecosystems, which affects animal, plant and human health, sometimes resulting in death or extreme disability and often in the world’s poorest countries.”¹²¹ Toxic contamination can harm humans directly by poisoning them and indirectly by entering the food chain and eventually be ingesting.¹²²

Already in 1990, the United Nations called on States to utilize criminal law to protect “nature and the environment against the dumping of hazardous wastes or other materials which pose a risk of damaging the environment...”¹²³ In 1994, the Economic and Social Council of the United Nations (ECOSOC) declared that environmental criminal law should be directed “in particular, to the regulation, control and, where necessary, the complete prohibition of hazardous activities, including the establishment and operation of hazardous installations, and the illegal import, export, movement and disposal of hazardous materials and wastes.”¹²⁴ Since then, incidents of unlawful toxic dumping have not abated, but rather have continued to surface in various locations around the world.¹²⁵

Unlawful transport and dumping of toxic substances can harm the environment in multiple respects. For example, in Nigeria, inhabitants of Ogoniland lodged a complaint with the African Commission on Human and Peoples’ Rights, alleging that “the State oil company, the Nigerian National Petroleum Company (NNPC), the majority shareholder in a consortium with Shell Petroleum Development Corporation (SPDC) [...] have caused environmental degradation and health problems resulting from the contamination of the environment among the Ogoni People”, including through “disposing toxic wastes into the environment and local waterways in violation of applicable international environmental standards.”¹²⁶ The

¹²¹ Rose (2014), p.19.

¹²² Prospieri and Terrosi (2017), p.513.

¹²³ Eighth United Nations Congress on the Prevention of Crime and the Treatment of Offenders (Havana, Cuba, 1990), Resolution on "The role of criminal law in the protection of nature and the environment" (endorsed in General Assembly in Resolution 45/121, (14 December 1990) at para.3).

¹²⁴ United Nations Economic and Social Council, Resolution 1994/15 “The role of criminal law in the protection of the environment”, 25 July 1994, Annex “Recommendations Concerning The Role Of Criminal Law In Protecting The Environment”, para.(c). Chlorofluorocarbons are banned under the Montreal Protocol of 1987.

¹²⁵ See for example *infra*, Chapter I(C)(4)(b) below referring to Trafigura toxic dumping incident.

¹²⁶ African Commission on Human and Peoples’ Rights, *Communication No. 155/96: Social and Economic Rights Action Center v. Nigeria (Ogoniland Case)*, Decision (“Ogoniland Decision”), para.2 (The complainants also alleged that “The consortium also neglected and/or failed to maintain its facilities causing numerous avoidable spills in the proximity of villages. The resulting contamination of water, soil and air has had serious

Commission found that the Nigerian Government had violated the rights of the Ogoni complainants, including through the environmental degradation and that this amounted to a violation of *inter alia* the right to life.¹²⁷ In addition, these events in Ogoniland have provided the basis for proceedings in the Dutch courts, which are still under appeal.¹²⁸ The impact of improper storage and dumping of toxic chemicals can result in long-term environmental harm. A study by UNEP and the Nigerian Government found that contamination from an oil spill was present 40 years after the spill, despite clean-up attempts.¹²⁹

In Ecuador, inhabitants complained for years of the pollution and improper storage of dangerous chemicals caused by Chevron (which merged with Texaco in 2001) during its oil exploration and extraction operations in the Ecuadorian Amazon from the 1960s to the 1990s. The effects of Chevron's activities reportedly included anthropocentric harm in the form of deaths from cancer, miscarriages and birth defects, threatening the survival of several rainforest tribes, and mixed anthropocentric/eco-centric harm such as the death of livestock and fish.¹³⁰ A recent attempt¹³¹ to refer Chevron's conduct to the ICC was rejected by the Office of the Prosecutor on the basis that it did not reveal crimes falling within the Court's jurisdiction.¹³²

short and long-term health impacts, including skin infections, gastrointestinal and respiratory ailments, and increased risk of cancers, and neurological and reproductive problems.”).

¹²⁷ Ogoniland Decision, para. 67 (“The security forces were given the green light to decisively deal with the Ogonis, which was illustrated by the wide spread terrorisations [sic] and killings. The pollution and environmental degradation to a level humanly unacceptable has made it living in the Ogoni land a nightmare. The survival of the Ogonis depended on their land and farms that were destroyed by the direct involvement of the government. These and similar brutalities not only persecuted individuals in Ogoniland but also the whole of the Ogoni community as a whole. They affected the life of the Ogoni society as a whole.”).

¹²⁸ See Dam-de Jong and Stewart (2017), p.21 *citing* District Court The Hague, *Oguru-Efanga/Shell*, Judgment of 30 January 2013, ECLI:NL:RBSGR:2013:BY9850; District Court The Hague, *Dooch/Shell*, Judgment of 30 January 2013, ECLI:NL:RBSGR:2013:BY9854; and District Court, *Akpan/Shell*, Judgment of The Hague 30 January 2013, ECLI:NL:RBSGR:2013:BY9854. All of the claims but one were dismissed due to the damage being caused by third parties and not being reasonably preventable: http://www.prakkendoliveira.nl/user/file/130130_press_relese_dc_the_haag_re_shell.pdf; Cees van Dam, “Preliminary judgments Dutch Court of Appeal in the Shell Nigeria case”, available at <http://www.ceesvandam.info/default.asp?fileid=643>.

¹²⁹ United Nations Environment Program, *Environmental Assessment of Ogoniland*, 2011 (available at http://postconflict.unep.ch/publications/OEA/UNEP_OEA_ES.pdf).

¹³⁰ P. Radden Keefe, ‘Reversal of Fortune: A crusading lawyer helped Ecuadorians secure a huge environmental judgment against Chevron. But did he go too far?’, *The New Yorker*, 9 January 2012, available at www.newyorker.com/magazine/2012/01/09/reversal-of-fortune-patrick-radden-keefe; Caitlin Lambert, “Environmental Destruction in Ecuador: Crimes Against Humanity Under the Rome Statute?”, *Leiden Journal of International Law* (2017), 30, pp. 707–729 (“Lambert (2017)”), p.729.

¹³¹ Request to the Office of the Prosecutor of the ICC from the Legal Representatives of the Victims, ‘Communication: Situation in Ecuador’, 23 October 2014, available at chevrontoxico.com/assets/docs/2014-icc-complaint.pdf.

¹³² Letter from M.P. Dillon, Head of the Information and Evidence Unit of the OTP to R. Doak Bishop, Partner of King & Spalding LLP, Reference No. OTP2014/036752, 16 March 2015, available at freebeacon.com/wp-

An example of toxic dumping with grave effects on human health is demonstrated by the disturbing events in the Ivory Coast in August 2006, where several hundred tons of caustic soda and petroleum residues were reportedly dumped in open air public waste sites in Abidjan, Ivory Coast. The toxic fumes from the waste reportedly caused nosebleeds, nausea, and vomiting, and unresolved allegations¹³³ arose that this killed several people and causing illness to many more.¹³⁴ European, Korean, and Russian companies were involved, as well as a local company. Cleaning up the waste required the removal of thousands of tons of the waste itself, as well as contaminated soil, water and concrete.¹³⁵ The company, along with the Ukrainian captain of the boat, was prosecuted and convicted for the attempts to illegally dump the waste in the Netherlands but not for the actual dumping in Cote d'Ivoire, which was reportedly the subject of a settlement with the group of victims.¹³⁶

Similar incidents had occurred previously and had provided the impetus for an international agreement to controls the movement of hazardous substances across frontiers, which resulted in the Basel Convention as discussed below.¹³⁷ For example, in 1986 a ship called the *Khian Sea* sought to dump its load of 15,000 tons of ash from Philadelphia in various countries. It managed to dump 3,000 tons in Haiti, and then ultimately dumped the remaining ash in the Indian Ocean after changing the name of the boat.¹³⁸ In 1988, an Italian owned ship called the

content/uploads/2015/04/ICC-letter.pdf. See further Chapter III(B)(1) (discussing the lack of overlap between Chevron's alleged crimes and the ICC's temporal jurisdiction).

¹³³ The United Nations Disaster Assessment & Coordination (UNDAC) Commission noted that while there were reports that seven people had died, no autopsies had been performed to verify the cause of death and pre-existing pollution levels in the lagoon prior to the dumping was considered too high to allow for identification of the hazardous waste in question; United Nations Disaster Assessment & Coordination (UNDAC), *Cote d'Ivoire, Urban Hazardous Waste Dumping*, 11-19 September 2006 ("UNDAC (2006)"), p.10. See also Amnesty International and Greenpeace International, *The Toxic Truth: about a Company called Trafigura, a ship called the proba koala, and the dumping of toxic waste in Cote d'Ivoire* (2012) ("Amnesty Report on Cote d'Ivoire (2012)"), Annex 1, p.212 ("Predicting or detecting any mid and long-term implications for the environment arising from the dumping would be a speculative exercise and a near impossibility against a background of poor waste management practice, a huge variety of dumping places, poor baseline data on environmental pollution and unresolved issues around the exact composition of the waste.").

¹³⁴ See Amnesty Report on Cote d'Ivoire (2012); United Nations Human Rights Council, *Report of the Special Rapporteur on the adverse effects of the movement and dumping of toxic and dangerous products and wastes on the enjoyment of human rights, Okechukwu Ibeanu*, UN Doc. A/HRC/12/26, 15 July 2009, and UN Doc. A/HRC/12/26/Add.2, 3 September 2009, Add.2 ("Reports of Special Rapporteur on Toxic Dumping (2009)"); Rob White, *Crimes Against Nature: Environmental Criminology and Ecological Justice*, (Willan Publishing: Devon, 2008), p.119.

¹³⁵ See Amnesty Report on Cote d'Ivoire (2012); Reports of Special Rapporteur on Toxic Dumping (2009), para.6; White (2008), p.119.

¹³⁶ Robert Percival, *Washington Law Review*, vol.86:579, "Global Law and the Environment, No.2011-49" (2011) ("Percival (2011)"), p.622. The Captain was also given a suspended jail sentence of 5 months imprisonment for falsifying papers, and a junior employee of Trafigura received a 6 months suspended jail sentence and a fine of 25,000 euros.

¹³⁷ See *infra* Chapter I(C)(4)(b).

¹³⁸ Percival (2011), p.621 citing Jerry Schwartz, *The Trash that Wouldn't be Thrown Away*, Associated Press, 2 September 2000, Factiva Doc. No. aprs000020010803dw930i2bu.

Karin B, dumped 8,000 tons of toxic waste including PCBs in a Nigerian fishing village, causing an international incident.¹³⁹

Other examples of toxic dumping and misuse and mis-storage of chemicals demonstrate the range of conduct in question. Notably, South-East Asia has become a major trade route for Chlorofluorocarbons and other ozone-depleting substances, despite the fact these are banned due to their harmful effect on the ozone layer, and in turn on global warming.¹⁴⁰ Legal cases analogous to toxic dumping include the improper storage of waste at a municipal rubbish tip in Turkey in the 1990s, which reportedly killed thirty-nine people and was held to be a violation of article 2, the right to life, by the European Court of Human Rights.¹⁴¹ A family member of nine of the deceased brought a claim before the European Court of Human Rights, which found *inter alia* a violation of article 2, the right to life, noting that an expert had reported to the authorities on the danger of a methane explosion two years before the lethal event.¹⁴² The first instance chamber of the European Court of Human Rights noted in this case that a violation of the right to life “can be envisaged in relation to environmental issues”, and its finding of a violation of the right to life (as well as several other violations of rights) was upheld by the Grand Chamber.¹⁴³

Along with the harm to the environment, toxic dumping can negatively impact human health and well-being, and many legal cases concerning toxic dumping arise due to this anthropocentric harm.¹⁴⁴ The Human Rights Council has declared that toxic dumping may jeopardize specific human rights. In particular, it noted that illicit traffic in, and improper management and disposal of, hazardous substances and wastes could violate, *inter alia*, the

¹³⁹ Percival (2011), p.621.

¹⁴⁰ Rose (2014), p.21.

¹⁴¹ The Grand Chamber of the European Court of Human Rights held that the actions of the Turkish authorities constituted substantive and procedural violations of the right to life under article 2, a violation of the right to an effective remedy under article 13, as well as a violation of the right to enjoyment of possessions under article 1(1) of Protocol 1; *Öneryıldız v. Turkey* (48939/99) ECHR Grand Chamber, [30 November 2004], (“*Öneryıldız v. Turkey* [GC]”), p.59 (disposition). See also Council of Europe, *Manual on Human Rights and the Environment*, (second edition) (2012), p.36-37.

¹⁴² Council of Europe, *Manual on Human Rights and the Environment*, (second edition) (2012), p.36-37 (“On the other hand, the Court found a violation of Article 2 in the case of *Öneryıldız v. Turkey*. In this case, an explosion occurred on a municipal rubbish tip, killing thirty-nine people who had illegally built their dwellings around it. Nine members of the applicant’s family died in the accident. Although an expert report had drawn the attention of the municipal authorities to the danger of a methane explosion at the tip two years before the accident, the authorities had taken no action. The Court found that since the authorities knew – or ought to have known – that there was a real and immediate risk to the lives of people living near the rubbish tip, they had an obligation under Article 2 to take preventive measures to protect those people. The Court also criticised the authorities for not informing those living next to the tip of the risks they were running by living there. The regulatory framework in place was also considered to be defective.”).

¹⁴³ *Öneryıldız v. Turkey* (48939/99) [2002] ECHR 491, para.64.

¹⁴⁴ See discussion of cases before human rights bodies, immediately above.

rights to life and health.¹⁴⁵ Other human rights that toxic dumping may implicate are the “right of peoples to self-determination and permanent sovereignty over natural resources, (and) the right to development”.¹⁴⁶

Internationally, toxic dumping and the movement of hazardous wastes is regulated by the Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and Their Disposal of 1989 (“The Basel Convention”). The annexes to the Basel Convention provide a list of the controlled or prohibited substances, and the convention essentially requires authorization for any movement or storage of such materials if an international frontier is involved. Under the International Law Commission’s Articles on the Prevention of Transboundary Harm from Hazardous Activities, where a dispute cannot be resolved through consultation or negotiation within 6 months, a party may engage compulsory fact-finding procedures by an impartial commission.¹⁴⁷

Some domestic systems address toxic dumping and the consequent environmental harm on a regular basis and have developed sophisticated legal codes to curb the practice and condemn transgressors.¹⁴⁸ While these domestic legal proceedings do not constitute a form of public international law, they provide illustrations of the widespread occurrence of environmental harm and criminal proceedings to repress that harm, and can provide indications of state practice.¹⁴⁹

However, many domestic systems are incapable of addressing such practices, particularly in countries torn by conflict or suffering from a lack of organized governance.¹⁵⁰ These locations are an attractive target, as toxic dumping can be a profitable enterprise for unscrupulous

¹⁴⁵ Commission on Human Rights, Resolution 2005/15, para.4 (“Reaffirms that illicit traffic in and dumping of toxic and dangerous products and wastes constitute a serious threat to human rights, including the right to life, the enjoyment of the highest attainable standard of physical and mental health and other human rights affected by the illicit movement and dumping of toxic and dangerous products, including the rights to clean water, food, adequate housing and work”). See also Human Rights Council Resolution 9/1, 12/18, 18/11.

¹⁴⁶ Special Rapporteur on Toxic Waste, Fatma-Zohra Ouhachi-Vesely, Report submitted by the Special Rapporteur on Toxic Waste on adverse effects of the illicit movement and dumping of toxic and dangerous products and wastes on the enjoyment of human rights, E/CN.4/2001/55, para. 58.

¹⁴⁷ International Law Commission, Articles on the Prevention of Transboundary Harm from Hazardous Activities (2001), article 19 (see also United Nations General Assembly Resolution 62/68, Annex, A/RES/62/68, 8 January 2008 (approving of the International Law Commission’s work on these articles and approving them as contained in the annex to Resolution 62/68); Stephens (2009), p.76.

¹⁴⁸ See, e.g., Kathleen Brickey, Charging Practices in Hazardous Waste Crime Prosecutions, *Ohio State Law Journal*, vol.62: 1077 (2001), p.1088 (“The prosecution summaries show that in the first ten years of the government’s efforts to establish a formal criminal enforcement program, the Justice Department prosecuted nearly 350 environmental cases referred to it by the EPA”).

¹⁴⁹ See *infra* Chapter I(C)(i), setting out the sources of law section on domestic cases.

¹⁵⁰ Rose (2014), p.19. (noting that much of the toxic dumping is carried out in the World’s poorest countries). See also Skinnider (2011), pp.27-28; UNODC Toolkit (2012), p.3.

individuals and organizations and can cause serious injury and even death to members of affected communities.

(c) Wildlife exploitation

A third prevalent form of environmental harm is that committed against animals and plants, known collectively as wildlife exploitation. The term wildlife crime has been described as encompassing “the illegal taking, possession, trade or movement of animals and plants or their derivatives in contravention of international, regional, or national legislation.”¹⁵¹ Typical wildlife offences including unlawful poaching and hunting,¹⁵² exporting and importing, logging,¹⁵³ trafficking, possessing and consuming wild fauna and flora.¹⁵⁴ Rose explains how, for example, “animals, birds, insects, reptiles, and plants, and parts thereof, are taken illegally in response to demands from private collectors and zoos for rare and unusual species, from research facilities for laboratory animals and from niche consumer markets for traditional Asian and African medicines and exotic foods such as reef fish and bushmeat” and that demand for unusual pets and for fashion items also drives these criminal practices.¹⁵⁵

Wildlife crime can be enabled and exacerbated by low-level corruption, but also by unlawful conduct by individuals at the highest levels of government.¹⁵⁶ Some of the most pernicious wildlife exploitation and illegal trading is perpetrated by organized networks of individuals, including companies, brokers and middlemen, and reports indicate that transboundary environmental crimes are becoming increasingly systematic and sophisticated, involving organized crime groups and complex trade routes with various techniques for concealment.¹⁵⁷

The growing threat of illegal wildlife exploitation is reflected in United Nations General Assembly statements, such as in its 2015 Resolution on tackling illicit trafficking in wildlife.¹⁵⁸ The General Assembly expressed its concern over the “increasing scale of

¹⁵¹ Cooper et. al. (2009), p.2.

¹⁵² The hunting or poaching may be unlawful because it concerns a protected species, because the location of the hunting is protected, such as a nature reserve or national park, because unlawful hunting techniques or weaponry is used or because of exceeding quotas; UNODC Toolkit (2012), p.39.

¹⁵³ Illegal logging may include logging protected tree species, logging in protected areas, excessive logging, logging without permits, fraudulently using or obtaining permits, non-payment of logging taxes and other forest fees, and damaging forest eco-systems; UNODC Toolkit (2012), p.36.

¹⁵⁴ UNODC Toolkit (2012), 2012, p.34. Associated offences including document fraud, money-laundering, tax evasion, and corruption.

¹⁵⁵ Rose (2014), p.17.

¹⁵⁶ UNODC Toolkit (2012), p.54.

¹⁵⁷ See Rose (2014), p.16, and, in relation to illegal timber trade in Asia, Rose (2014), p.20.

¹⁵⁸ UNGA Resolution 69/314.

poaching and illegal trade in wildlife and wildlife products”, which is threatening some species, including rhinoceros and elephants, with local and sometimes global extinction, and damages ecosystems, as well as anthropocentric interests in terms of livelihoods, rule of law, and national stability.¹⁵⁹ It called on member States to contribute to the “prevention, investigation and prosecution of such illegal trade as well as strengthening enforcement and criminal justice responses, in accordance with national legislation and international law”, including through measures at the bilateral, regional and international levels.¹⁶⁰ The scale of the unlawful exploitation is indicated by estimated monetary value of illegal trade in flora and fauna at between 7 and 23 billion USD annually.¹⁶¹

Historically, the body of law covering wildlife exploitation developed in relation to competing claims to hunt, trap, and utilise wildlife.¹⁶² However, harmful over-exploitation of vulnerable species has not dissipated despite the ever-growing awareness of the fragility of many animal and plant species and the impact of human activity on the survival of these species. This conduct is directly addressed by the Convention on International Trade in Endangered Species of Wild Fauna and Flora (1973) (“CITES”), which has over 170 State Parties.¹⁶³ The primary purpose of CITES is to ensure that the international trade of wild animals and plants does not threaten their survival. CITES would be an essential reference for any proceedings under international criminal law addressing wildlife exploitation, as it “captures on a global list the species about which, based on international consensus, there is reason to be concerned.”¹⁶⁴

CITES obliges States to require permits for any import, export, re-export, or introduction from the sea, and to designate management authorities to administer the licensing system with advice from scientific authorities. Trade in endangered species – listed in Annex 1, is limited to exceptional circumstances.¹⁶⁵ CITES obliges Parties to take measures to penalize trade in the protected specimens,¹⁶⁶ but does not require that unlawful trade be subject to criminal sanctions. States differ on the form or redress for these abuses, with only approximately a quarter having penalties of greater than four years imprisonment for violations of CITES-

¹⁵⁹ UNGA Resolution 69/314.

¹⁶⁰ UNGA Resolution 69/314, paras.3, 11.

¹⁶¹ Christian Nellemann, Rune Henriksen, Patricia Raxter, Neville Ash, Elizabeth Mrema, (eds.), “The Environmental Crime Crisis – Threats to Sustainable Development from Illegal Exploitation and Trade in Wildlife and Forest Resources: A UNEP Rapid Response Assessment”, 2014 (“UNEP (2014)”), p.7.

¹⁶² See UNODC Toolkit (2012), p.25.

¹⁶³ United Nations Office of Drugs and Crime, World Wildlife Crime Report Trafficking in protected species, 2016 (“UNODC (2016)”), p.24.

¹⁶⁴ UNODC (2016), p.25.

¹⁶⁵ CITES, article 3; UNODC Toolkit (2012), p.14-15.

¹⁶⁶ CITES, article 8; UNODC Toolkit (2012), p.15.

related offences.¹⁶⁷ Moreover, CITES does not directly impose penal sanctions on individuals and therefore could not be used as a sole basis for prosecution. While CITES has had some success in curtailing the trade of endangered species, it may also inadvertently increase the threat to endangered species by advertising their rarity.¹⁶⁸

Other international conventions designed to address species endangerment and exploitation include the Convention on the Conservation of Migratory Species of Wild Animals;¹⁶⁹ the Convention on Biological Diversity;¹⁷⁰ the Convention concerning the Protection of the World Cultural and Natural Heritage;¹⁷¹ and the Convention on Wetlands of International Importance especially as Waterfowl Habitat.¹⁷²

A nascent effort to regulate wildlife crime has been made with the adoption of the Malabo Protocol on Amendments to the Protocol on the Statute of the African Court of Justice and Human Rights (“Malabo Protocol”). Article 28A(1)(13) declares “Illicit exploitation of natural resources” to be a criminal offense within the Court’s jurisdiction. Illicit exploitation is defined to encompass a broad range of conduct which may cause harm to natural resources.¹⁷³ On paper, this is a powerful provision, as it may apply in both peacetime and in armed conflict, and does not need to be part of a widespread or systematic campaign directed

¹⁶⁷ UNODC (2016), p.23.

¹⁶⁸ UNODC Toolkit (2012), p.16.

¹⁶⁹ United Nations, *Treaty Series*, vol. 1651, No. 28395. Adopted on 23 June 1979 and entered into force on 1 November 1983, in Bonn, Germany, the Convention on the Conservation of Migratory Species of Wild Animals is a “is a framework agreement which relies on appendices for expanding or changing its commitments over time.” It revolves around its appendices: “Appendix I lists the migratory species which are endangered and hence subject to various restrictions, most notably the prohibition of their taking. Appendix II contains a list of species with an unfavourable conservation status, which require international agreements for their conservation and management, as well as those with a favourable conservation status which could nevertheless significantly benefit from international cooperation Over 120 states have ratified the treaty. However, Russian Federation, China, Japan, the United States and Canada are not parties to the treaty.” Independent Analysis on Common Services and Synergies in CMS Family, UNEP/CMS/StC44/15.1, 14 October 2015, p.16.

¹⁷⁰ United Nations, *Treaty Series*, vol. 1760, No. 30619.

¹⁷¹ United Nations, *Treaty Series*, vol. 1037, No. 15511.

¹⁷² United Nations, *Treaty Series*, vol. 996, No. 14583.

¹⁷³ Article 28L Bis of the Protocol provides that ‘For the purpose of this Statute, “Illicit exploitation of natural resources” means any of the following acts if they are of a serious nature affecting the stability of a state, region or the Union: a) Concluding an agreement to exploit resources, in violation of the principle of peoples’ sovereignty over their natural resources; b) Concluding with state authorities an agreement to exploit natural resources, in violation of the legal and regulatory procedures of the State concerned; c) Concluding an agreement to exploit natural resources through corrupt practices; d) Concluding an agreement to exploit natural resources that is clearly one-sided; e) Exploiting natural resources without any agreement with the State concerned; f) Exploiting natural resources without complying with norms relating to the protection of the environment and the security of the people and the staff; and g) Violating the norms and standards established by the relevant natural resource certification mechanism.” These prohibitions parallel those set out in the 2006 Protocol Against the Illegal Exploitation of Natural Resources of the International Conference on the Great Lakes Region. Indeed, the term “exploitation” itself is not defined in the Protocol to the Statute and instead arguably is meant to have the same definition as that in the 2006 Protocol of the ICGLR: “Exploitation” is defined as ‘any exploration, development, acquisition, and disposition of natural resources’; see Dam-de Jong and Stewart (2017), p.11.

against a civilian population. However, only six states have ratified the Protocol to date,¹⁷⁴ well short of the 15 required for it to enter into force.¹⁷⁵

The illegal poaching and trade of protected species is extensive. For example, the World wildlife seizure database operated by the CITES Secretariat and the World Customs Organization has recorded 380 tiger skin seizures between 2005 and 2014, worth about four million United States dollars. Considering that there are only approximately 3,000 wild tigers left alive, the catastrophic impact on the species' survival prospects caused by this illegal trade is manifest.¹⁷⁶ The extent of the market driving this exploitation of tigers is shown by a UNEP study in China in 2007, which found that 43 percent of respondents had consumed some form of tiger product.¹⁷⁷ In the area of Cambodia, Laos, and Vietnam, high volumes of illegal cross-border wildlife trade have been recorded.¹⁷⁸

The trade and use of bushmeat from gorillas and other endangered animals has been documented by UNEP, and is on the increase.¹⁷⁹ The bushmeat is sometimes used as food for workers and militias engaged in pillage. The organized groups extracting natural resources have also killed gorillas as retaliation against authorities for interfering with their ongoing extraction of natural resources.¹⁸⁰ Gorilla trade and exploitation in the Congo Basin frequently crossed frontiers, taking advantage of areas of weak regulatory enforcement. The Eastern and Western species of gorillas are listed on Appendix I of CITES, which prohibits international trade (live or dead, including products and derivatives) for primarily commercial purposes.¹⁸¹

The United Nations General Assembly has expressed its serious concern about “the steady rise in the level of rhinoceros poaching and the alarmingly high levels of killings of elephants in Africa, which threaten those species with local extinction and, in some cases, with global extinction.”¹⁸² It was estimated that in 2011, around 37,000 African elephants were poached, which amounts to 7 percent of the African Elephant population rates. That is greater than the

¹⁷⁴ List of Countries which have Signed, Ratified/Acceded to the Protocol on the Statute of the African Court of Justice and Human Rights, https://au.int/sites/default/files/treaties/7792-sl-protocol_on_the_statute_of_the_african_court_of_justice_and_human_rights.pdf (last accessed 2 August 2017).

¹⁷⁵ The Malabo Protocol, article 9

¹⁷⁶ UNODC (2016), p.15.

¹⁷⁷ UNEP (2014), p.39.

¹⁷⁸ Rose (2014), p.21.

¹⁷⁹ Christian Nellemann, Ian Redmond, Johannes Refisch (eds), *The Last Stand of the Gorilla – Environmental Crime and Conflict in the Congo Basin. A Rapid Response Assessment*, 2009 (“UNEP Gorilla Study”), pp.6, 11, 24, 46.

¹⁸⁰ UNEP Gorilla Study, p.22.

¹⁸¹ UNEP Gorilla Study, p.13.

¹⁸² UNGA Resolution 69/314.

estimated rate at which African elephant populations increase (five percent), which in and of itself demonstrates the danger of this type of practice.¹⁸³ A UNEP study in 2014 found similarly disturbing results, with the forest elephant population estimated to have declined around 62 percent between 2002 and 2011.¹⁸⁴ From 2009 to 2014, 91 shipments of ivory were recorded, totalling 159 metric tons, but this is likely to only be a small proportion of the actual volume of illicit trades in these threatened animals.¹⁸⁵

Concerning rhinoceros, “there are less than 28,000 rhinos of any species left in Africa and Asia” and less than 5,000 black rhinos in existence.¹⁸⁶ A study of the rhino populations in Kruger National Park in South Africa, which is home to approximately 20 percent of the world’s black rhinos and 45 percent of its white rhinos, found that poaching continues at dangerous levels.¹⁸⁷ For many years, rhinoceros horn has been utilized as a treatment for fevers, cerebrovascular disease, and more recently cancers, in traditional medicine in Asia.¹⁸⁸ Seizures of rhinoceros horn have steadily increased in the last ten years. After trade in white rhinoceros was prohibited throughout its range except for South Africa and Swaziland in 2005, the number of applications for exceptions applicable in these two countries (for trade for zoos and hunting trophies) increased sharply.¹⁸⁹ Many of the applications for these exceptions came from persons with no hunting background, indicating that the hunts are being used as a cover to obtain the rhinoceros horn.¹⁹⁰ Rhino horn is traded across the border between China and Burma,¹⁹¹ and other major destination countries for rhinoceros horn are listed as Vietnam, China, Ireland, Czech Republic, United States and Thailand.¹⁹²

The Wildlife Justice Commission, which conducts investigations into the illegal trade of animals, obtained information including undercover video footage, indicating that a criminal network of over 50 individuals was operating transnationally from its base in Vietnam, trading in rhino, elephant, tiger and other endangered species both via shops and social media

¹⁸³ UNODC (2016), p.42-43.

¹⁸⁴ UNEP (2014), p.7.

¹⁸⁵ UNODC (2016), p.44.

¹⁸⁶ UNODC (2016), p.70. See also UNGA Resolution 69/314 (noting the “steady rise in the level of rhinoceros poaching”).

¹⁸⁷ Sam Ferreira et. al., “Disruption of Rhino Demography by Poachers May Lead to Population Declines in Kruger National Park, South Africa”, Public Library of Science, PLoS One. 2015; 10(6).

¹⁸⁸ UNODC (2016), p.70.

¹⁸⁹ UNODC (2016), p.70.

¹⁹⁰ UNODC (2016), p.70-71.

¹⁹¹ Rose (2014), p.21.

¹⁹² UNODC (2016), p.71.

platforms.¹⁹³ The ivory and rhino horn were identified as coming from Angola, South Africa, and Mozambique.¹⁹⁴ As the trade involved animals on appendices 1 and 2 to CITES, which Vietnam is a party to, it was considered to have an obligation to end this illegal trade.¹⁹⁵

As noted above, the unlawful trade and movement of protected species constitutes a huge market internationally. Illegal logging and timber trade is particularly lucrative.¹⁹⁶ Seizures of illegally handled species indicate the breadth of supposedly protected species being traded and the depth of the trading occurring, as well as the huge value of these markets. For example, the largest ever seizure of rosewood, which is a tropical hardwood, often traded illegally, was conducted in 2014 by Singapore authorities (it involved some 3,000 tons of Malagasy rosewood).¹⁹⁷ From 2005 through to 2015, around 10,000 tons of protected rosewood was seized by customs.¹⁹⁸

Confronting this lucrative and large-scale trade is complicated by several factors. Because of its transnational nature, the trade in illegal logging can escape the concerted attention of domestic law enforcement authorities. International bodies with a mandate to address illegal logging typically do not have an operational international police force exists and so primarily rely on assisting domestic enforcement efforts.¹⁹⁹ The successful international operations that occur provide a glimpse of the quantum of the illegal logging and trading occurring worldwide. In 2015, INTERPOL participated in Operation Log, which involved the seizure of illegally harvested woods such as kosso worth over 200 million United States dollars.²⁰⁰ Because only some species of rosewood are specifically protected from unregulated trade, it can be difficult to ascertain the exact level of illegal trade occurring, and it is difficult for customs inspectors to rapidly differentiate between similar looking species of trees.²⁰¹ Illegal logging has a compounding impact on environmental harm as it contributes to carbon dioxide emissions (tropical deforestation is estimated by UNEP to account for 10 to 15 percent of

¹⁹³ Wildlife Justice Commission (Dr. Edgardo Buscaglia et. al.), *Accountability Panel Decision on the Map of Facts regarding Illegal Trade in Wildlife Products in Nhi Khe, Vietnam*, 15 November 2016 (“Wildlife Justice Commission (2016)”), p.2.

¹⁹⁴ Wildlife Justice Commission (2016), p.4, point 10.

¹⁹⁵ Wildlife Justice Commission (2016), p.5, point 13.

¹⁹⁶ UNEP (2014), p.8.

¹⁹⁷ UNODC (2016), p.35.

¹⁹⁸ UNODC (2016), p.38.

¹⁹⁹ Interpol and The World Bank, *Chainsaw Project: and Interpol perspective on law enforcement in illegal logging*, 2009 (Lyon and Washington DC), p.31.

²⁰⁰ UNODC (2016), p.38.

²⁰¹ UNODC (2016), p.35, 39.

global carbon emissions),²⁰² as well as soil erosion, loss of water retention, and the destabilisation of local ecosystems.²⁰³ Its anthropocentric impact is also multi-faceted, as it can remove the homes, livelihoods, and sources of sustenance for forest-dwelling peoples.²⁰⁴

Wildlife exploitation, and particularly illegal logging, can inflame armed conflict as it feeds resource wars and provides a source of revenue to illegal groups looking purchase weapons and finance other military activities. This is beginning to be reflected in the jurisprudence of the ICC. In *Lubanga*, the Court recognised that exploitation of natural resources in Ituri fuelled the protracted armed conflict.²⁰⁵ In *Ntaganda*, the Office of the Prosecutor alleges that ‘[t]he district of Ituri is rich in natural resources, including gold, diamonds, coltan, timber and oil . . . Competition over these resources has, in many ways, fanned the flames of conflict in the area.’²⁰⁶ UNEP has noted that unlawful exploitation of species provides a source of finance for not only armed non-state actors but also organized crime groups and terrorist groups.²⁰⁷ It has specifically identified another ICC indictee, Joseph Kony of the Lord’s Resistance Army, as directing his rebel force to hunt ivory in the Garamba National Park on the border between the Democratic Republic of Congo and South Sudan.²⁰⁸ In this manner, wildlife exploitation, like other grave forms of environmental harm, compounds on societal problems such as armed conflict and further undermines efforts to establish peace, security and the rule of law.

D. Definitional, theoretical, and legal underpinnings

1. The natural environment

It is necessary at the outset to define the term “natural environment” (herein shortened to “environment”) which is the subject of this analysis. As familiar as this term is, it is difficult

²⁰² UNEP (2014), p.14; Prospieri and Terrosi (2017), p.513 citing O. Edenhofer et al. (eds), Working Group III Contribution to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change, Climate Change 2014: Mitigation of Climate Change, at 9, available online at https://www.ipcc.ch/pdf/assessment-report/ar5/wg3/ipcc_wg3_ar5_full.pdf.

²⁰³ Rose (2014), p.19.

²⁰⁴ Prospieri and Terrosi (2017), p.513.

²⁰⁵ *Prosecutor v. Thomas Lubanga Dyilo*, ICC-01/04-01/06-2842, Judgment Pursuant to Article 74 of the Statute, Trial Chamber I, 14 March 2012 (“*Lubanga* Article 74 Decision”), paras.67, 71.

²⁰⁶ *Prosecutor v. Ntaganda*, ICC-01/04-02/06-503-Conf-AnxA, Public redacted version of ‘Prosecutor’s Pre-Trial Brief’, Trial Chamber VI, 9 March 2015, (1 September 2015, ICC- 01/ 04- 02/ 06- 503- AnxA- Red2), para.7.

²⁰⁷ UNEP (2014), p.8.

²⁰⁸ UNEP (2014), p.54.

to comprehensively delineate, and many definitions have been suggested.²⁰⁹ The definition provided by the International Law Commission (“ILC”) is used herein as the ILC is the principle non-judicial body charged with examining and distilling the rules of international law. The term “natural environment” under international law is that of the International Law Commission.

the words ‘natural environment’ should be taken broadly to cover the environment of the human race and where the human race develops, as well as areas the preservation of which is of fundamental importance in protecting the environment. These words therefore cover the seas, the atmosphere, climate, forests, and other plant cover, fauna, flora and other biological elements.²¹⁰

While most parties involved in international criminal law agree that humankind’s detrimental impact on the environment must be curbed, the theoretical underpinnings for this ecologically protective accord are less united.²¹¹

2. Anthropocentrism

International criminal law is largely based on human-centred values and interests. Similarly, international humanitarian law (IHL) is founded on anthropocentric values, designed to minimize unnecessary human suffering resulting from armed conflict.²¹² The environment has traditionally been viewed through an anthropocentric lens and characterised as a resource to be exploited for the benefit of humankind, particularly during times of armed conflict.²¹³ International criminal law incorporates many of the principles and provisions of IHL, and has accordingly focused on the principles of humanity and reducing human suffering. Similarly, many commentators adhere to the essentially utilitarian anthropocentric approach, valuing the

²⁰⁹ Various jurisdictions formulate the definition in different ways. For example, the Environmental Protection Act of the State of Victoria in Australia contains the following definition: “‘environment’ means the physical factors of the surroundings of human beings including the land, waters, atmosphere, climate, sound, odours, tastes, the biological factors of animals and plants and the social factor of aesthetics.” The reference to sound, tastes and aesthetic factors indicates an even broader conception of the environment than that set out by the International Law Commission; Environment Protection Act 1970 - Section 4 (available at http://www.austlii.edu.au/au/legis/vic/consol_act/epa1970284/s4.html) (last checked 29 May 2015). Dam-de Jong defines the environment as “The environment comprises the air, water, land, flora and fauna, which interact as part of different ecosystems”; Dam-de Jong (2015), p.25.

²¹⁰ International Law Commission, “Draft Code of Crimes Against the Peace and Security of Mankind”, 43(2) *Yearbook of the International Law Commission* (1991), at 107, para.4; cited in Peterson (2009), pp.328-329. See also Schmitt (1997), p.5.

²¹¹ The split between the anthropocentric and eco-centric views resulted in the inclusion of two separate provisions addressing “widespread, long-term, and severe” environmental damage in Additional Protocol I, article 55 from a more anthropocentric view and article 35(3) from a more eco-centric view, as discussed in more detail below; Schmitt (1997), pp.69-70.

²¹² See Schmitt (1997), pp.6, 56, 62.

²¹³ Drumbl (1998-1999), pp.122-123.

environment to the extent it is able to serve the interests of humankind, but no further.²¹⁴ Because of this, the environment has not generally been afforded its own intrinsic value²¹⁵ and the provisions protecting the environment under international criminal law usually address destruction of the environment only insofar as this will harm human interests. However, the environment is a value which cannot sustain unchecked exploitation.

3. Eco-centricism

In 1949, with the devastation and wounds of the Second World War still fresh, Aldo Leopold's Land Ethic was published, in which he observed that "all ethics so far evolved rest upon a single premise: that the individual is a member of a community of interdependent parts. The land ethic simply enlarges the boundaries of the community to include soils, waters, plants and animals, or collectively the land."²¹⁶ This eco-centric view, which has become more prevalent in recent decades, seeks to ascribe the environment an intrinsic value, irrespective of whether human beings suffer as a result of environmental harm.²¹⁷ Adherents to the eco-centric approach seek not only the application of international criminal law to environmental damage *per se*, but also the development of new prohibitions criminalising damage to the environment irrespective of a state of armed conflict and irrespective of whether human beings are harmed by the offending actions.

Several significant instruments of international law attribute value to the environment *per se*, rather than only insofar as it directly serves human interests. For example, the 1972 World Heritage Convention defines natural heritage as natural features, geological or physiographical formations, and natural sites of "outstanding universal view" from the "point of view of science" and "conservation", as well as due to aesthetic value.²¹⁸ Similarly, the United Nations General Assembly has emphasized the "intrinsic value of biological diversity"

²¹⁴ See, e.g., Brigadier-General Joseph G. Garrett III, US Army, "The Army and the Environment: Environmental Considerations during Army Operations" ("Garrett (1996)") in Richard Grunawalt, John King and Ronald McClain (eds.), *Protection of the Environment During Armed Conflict*, International Law Studies, Vol.69 (1996), p.46.

²¹⁵ However, see discussion below of cases from New Zealand and India in which environmental features have been given legal status, *infra* Chapter IV(D)(1)(a).

²¹⁶ Aldo Leopold, 1886-1948. *A Sand County Almanac, and Sketches Here and There* (New York: Oxford University Press, 1949).

²¹⁷ See, e.g., Jensen (2005), pp.151-152.

²¹⁸ World Heritage Convention 1972, 1037 UNTS 151, article 2 (defining natural heritage as "natural features consisting of physical and biological formations or groups of such formations, which are of outstanding universal value from the aesthetic or scientific point of view; geological and physiographical formations and precisely delineated areas which constitute the habitat of threatened species of animals and plants of outstanding universal value from the point of view of science or conservation; natural sites or precisely delineated natural areas of outstanding universal value from the point of view of science, conservation or natural beauty.").

along with its importance for human well-being, and has declared that “wild fauna and flora in their many beautiful and varied forms are an irreplaceable part of the natural systems of the Earth which must be protected for this and the generations to come.”²¹⁹

The environment’s intrinsic value is increasingly being legally recognised. Experts assessing harm to the environment have highlighted the utility of criminal law to protect environmental interests as such, by qualifying them as “penally-protected interests”.²²⁰ Several constitutions recognise the intrinsic value of the environment, particularly in South America. For example, Ecuador’s Constitution of 2008 recognises that nature “is entitled to full respect, existence, and the maintenance and regeneration of its vital cycles, structure, functions, and evolutionary processes.”²²¹ The Bolivian Constitution of 2009 recognises that not only humans but also “other living things” have the right to live in a healthy, protected and balanced environment,²²² and requires the State and territorial authorities to “preserve, conserve and contribute to the protection of the environment and the wild fauna maintained in ecological equilibrium, and the control of environmental contamination.”²²³

Specific cases have also generated supportive jurisprudence recognising the inherent value of the environment. In a 2008 Judgment concerning the Erika oil spill disaster, the *Tribunal Correctional de Paris* ascribed significance to non-commercial living beings, in other words, pure environmental harm independent of anthropocentric ownership.²²⁴ In New Zealand, the Supreme Court noted in a 2017 decision concerning land administered by the Department of Conservation that it had to consider the measures appropriate to “protect the ‘intrinsic values’

²¹⁹ UNGA Resolution 69/314 (“*Reaffirming* the intrinsic value of biological diversity and its various contributions to sustainable development and human well-being, and recognizing that wild fauna and flora in their many beautiful and varied forms are an irreplaceable part of the natural systems of the Earth which must be protected for this and the generations to come...”).

²²⁰ United Nations Economic and Social Council, Resolution 1994/15, “The role of criminal law in the protection of the environment”, Annex: Conclusions of the Seminar on the Policy of Criminal Law in the Protection of Nature and the Environment in a European Perspective, held at Lauchhammer, Germany, from 25 to 29 April 1992, para.4.

²²¹ Ecuadorian Constitution 2008, article 71 (“Nature, or Pacha Mama, where life is reproduced and occurs, has the right to integral respect for its existence and for the maintenance and regeneration of its life cycles, structure, functions and evolutionary processes. All persons, communities, peoples and nations can call upon public authorities to enforce the rights of nature. To enforce and interpret these rights, the principles set forth in the Constitution shall be observed, as appropriate. The State shall give incentives to natural persons and legal entities and to communities to protect nature and to promote respect for all the elements comprising an ecosystem.”).

²²² Bolivian Constitution of 2009, article 33 (“Everyone has the right to a healthy, protected, and balanced environment. The exercise of this right must be granted to individuals and collectives of present and future generations, as well as to other living things, so they may develop in a normal and permanent way.”).

²²³ Bolivian Constitution of 2009, article 299 (II)(1).

²²⁴ T. Corr. Paris, 16 January 2008, n8 99-34-895010, cited in Papadopoulou (2009), p.88.

of the land concerned”,²²⁵ which is explicitly required under the applicable legislation.²²⁶ Other cases recognising the environment’s intrinsic value have begun to emerge in domestic jurisprudence in recent years.²²⁷ The concept of an ecological, or environmental, point of view is also recognised in legal instruments under international law, including the Convention on the Conservation of Migratory Species.²²⁸

International criminal law has a limited field of application. Only the most serious harm to the environment is designated as criminal, meaning acts like burning oil wells in Iraq,²²⁹ or the use of chemical agents to defoliate the Vietnamese forests in the 1970s,²³⁰ would be addressed whereas less serious acts would be left for regulatory bodies to deal with. Proponents of the ecological perspective would seek to include other activities that result in massive damage to the environment, including large-scale commercial fishing with fishnets, clearing wilderness for property development, deforestation, and the construction of extensive motorway systems, often passing through or over fragile environmentally significant areas.²³¹ Extending the coverage of criminal prohibitions to explicitly cover these acts would be a significant development in the structures and ambit of international criminal law.

4. The historical development of international law relevant to prosecuting environmental harm

As there is no specific framework designed for the prosecution of environmental harm under international law, the most relevant existing rules and prohibitions under the Rome Statute of the ICC are assessed for their applicability to such proceedings. At the same time, article 21

²²⁵ Hawke's Bay Regional Investment Company Limited v Royal Forest and Bird Protection Society of New Zealand Incorporated [2017] NZSC 106 (“Hawke’s Bay Decision”), para.111.

²²⁶ See New Zealand Conservation Act 1987, Section 2(1), (“Conservation” is defined to mean the “preservation and protection of natural and historic resources for the purpose of maintaining their intrinsic values, providing for their appreciation and recreational enjoyment by the public, and safeguarding the options of future generations”. Additionally, “preservation” is defined in relation to a resource as “the maintenance, so far as is practicable, of its intrinsic values”, while “protection” in relation to a resource is defined as “its maintenance, so far as is practicable, in its current state; but includes ... its restoration, ... augmentation, enhancement, or expansion”).

²²⁷ See *infra* Chapter IV(D)(1)(a).

²²⁸ Convention on the Conservation of Migratory Species, United Nations, *Treaty Series*, vol. 1651, No. 28395, Preamble (“Conscious of the ever-growing value of wild animals from environmental, ecological, genetic, scientific, aesthetic, recreational, cultural, educational, social and economic points of view.”)

²²⁹ Peterson (2009), p.342; Schmitt (1997), pp.19, 75; Tara Weinstein, “Prosecuting Attacks that Destroy the Environment: Environmental Crimes or Humanitarian Atrocities?”, 17 *Geo. Int’l Env’tl. L. Rev.* 697 (2005), p.698, p.708 (all discussing whether the burning of the oil wells in Iraq qualified as a war crime under the existing provisions of international law).

²³⁰ Peterson (2009), pp.331-332; Aaron Schwabach, “Environmental Damage Resulting from the NATO Military Action Against Yugoslavia”, 25 *Colum. J. Env’tl. L.* 117 (2000) (“Schwabach (2000)”), p.126 (all discussing operations carried out by the United States Army during the Vietnam War and international criminal law).

²³¹ See White (2008), p.11.

of the Rome Statute on the applicable sources of law allows for the treaties, customary rules, and general principles of international environmental law to be applied by the Court, which will be particularly apposite in guiding proceedings concerning environmental harm.

The provisions and rules of international law relevant to the prosecution of environmental harm as currently formulated do not exist in a vacuum. Understanding the origins of international environmental law and international criminal law (as well as the inter-related body of international humanitarian law) is important in order to understand the underlying aims and motivations of laws relevant to the prosecution of environmental harm under international criminal law. Both international environmental law and international criminal law have experienced dramatic development in the last few decades (international environmental law since the 1970s and international criminal law since the 1990s).²³² Although international humanitarian law is much older in terms of written provisions, it has also seen a surge in development due to its judicial application in many international criminal cases in the modern international tribunals. The major aspects of the developments of these bodies of law are set out forthwith.

(a) Development of Environmental Law

International environmental law is structured around prevention of serious harm to the environment. It traditionally centered on State obligations, and largely relied on cooperative negotiation. Enforcement has been sought through public opinion rather than any binding mechanisms.²³³

Although international environmental law in its modern form is only recognisable from the 1970s onwards, its roots go back to the second half of the nineteenth century, when bilateral fisheries treaties began to be formed.²³⁴ Those early treaties, and the creation of international institutions such as the League of Nations in the 1920s and the United Nations in 1945, signalled a growing understanding of the interconnectedness of the world and the limits on the availability of natural resources.²³⁵ In this early period, States concluded treaties on an *ad hoc*, sporadic, and limited basis, generally seeking to preserve wildlife and protect waterways and

²³² See, e.g., Hague Institute for the Internationalisation of Law, General Rules and Principles of International Criminal Procedure and Recommendations of the International Expert Framework, October 2011, p.4.

²³³ See Robert McLaughlin, "Improving Compliance: Making Non-State International Actors Responsible for Environmental Crimes", 11 *Colo. J. Int'l Envtl. L. & Pol'y* 377 [2000] ("McLaughlin (2000)"), p.379-380.

²³⁴ Sands (2003), p.25.

²³⁵ Sands (2003), p.25.

seas.²³⁶ The *Trail Smelter* arbitration concerning sulphur fumes emitted from a smelter in Canada generated the axiomatic principle that “no state has the right to use or permit the use of its territory in such a manner as to cause injury by fumes in or to the territory of another or the properties or persons therein, when the case is of serious consequence and the injury is established by clear and convincing evidence.”²³⁷

However, anthropocentric interests drove forward the major developments in international law during this period, and the United Nations Charter contains no provisions addressing environmental protection or the conservation of natural resources.²³⁸ In the late 1940s some multilateral institutions and conventions were formed, such as the International Union for the Protection of Nature of 1947²³⁹ and the 1949 United Nations Conference on the Conservation and Utilisation of Resources,²⁴⁰ and in the 1950s and 1960s several significant environmental organizations and United Nations General Assembly resolutions were enacted, covering fisheries issues, pollution, the Antarctic, and wildlife conservation.²⁴¹

The period of sporadic un-coordinated developments concluded in 1972 when the Stockholm Declaration on the Protection of the Environment was issued by 116 States in attendance.²⁴² It noted in the Preamble that “in the long and tortuous evolution of the human race on this planet a stage has been reached when, through the rapid acceleration of science and technology, man has acquired the power to transform his environment in countless ways and on an unprecedented scale”. Principle 1 recognised the right to live in an environment of sufficient quality for dignity and well-being, as well as the responsibility of humankind “to protect and improve the environment for present and future generations.”²⁴³ Among the most significant provisions are Principle 21, which affirmed states’ responsibility to ensure that activities within their jurisdiction or control do not cause damage in another state or in outer space or on the high seas;²⁴⁴ Principle 22 which required states to co-operate in the development of

²³⁶ Sands (2003), p.26-27.

²³⁷ *Trail Smelter Award*, 35 AJIL 716 (1941); 9 ILR 317. Michael Bothe, Carl Bruch, Jordan Diamond, and David Jensen, “International law protecting the environment during armed conflict: gaps and opportunities”, *International Review of the Red Cross*, Volume 92 Number 879 September 2010 (“Bothe et. al. (2010)”), p.585.

²³⁸ United Nations Charter 1945; Sands (2003), pp.26-31.

²³⁹ McLaughlin (2000) citing 1977 Statutes, 18 IPE 8960. See also Sands (2003), p.31.

²⁴⁰ Sands (2003), pp.31-32.

²⁴¹ Sands (2003), p.34.

²⁴² Declaration of the United Nations Conference on the Human Environment (Stockholm Declaration), 16 June 1972, UN Doc. A/CONF.48/14/Rev. 1 (1973); Sands (2003), p.36.

²⁴³ Stockholm Declaration, article 1 provided further that “Man has the fundamental right to freedom, equality and adequate conditions of life, in an environment of a quality that permits a life of dignity and well-being, and he bears a solemn responsibility to protect and improve the environment for present and future generations.”

²⁴⁴ Bothe et. al (2010), p.584.

international environmental law; Principle 23, which allowed states a certain margin of appreciation to develop national standards; and Principle 24, which called on states to cooperate ‘to effectively control, prevent, reduce and eliminate adverse environmental effects resulting from activities conducted in all spheres, in such a way that due account is taken of the sovereignty and interests of all states’.²⁴⁵ The Stockholm Declaration ushered in a new more organised period in the development of international environmental law, particularly by calling on states to cooperate in the development of international environmental law.²⁴⁶ In the wake of the Stockholm Declaration, the United Nations Environment Program was created in 1972, and treaties were concluded concerning the dumping of waste at sea, the trade in endangered species (CITES), and the protection of cultural heritage,²⁴⁷ as well as the UN Convention on the Law of the Sea (UNCLOS) of 1982.²⁴⁸

Prior to the Rio Conference on Environment and Development of 1992 (UNCED), treaties were concluded on environmental impact assessments, transboundary impacts of industrial accidents, and the protection and use of international watercourses,²⁴⁹ and international organizations became more active in the environmental field, such as through the moratorium on commercial whaling issued by the International Whaling Commission, and the 1982 UNGA World Charter for Nature.²⁵⁰

The 1992 Rio Declaration on Environment and Development²⁵¹ reflects the central position of anthropocentric and development interests in the international regulation of interaction with the environment.²⁵² Article 1 places human beings “at the centre of concerns for sustainable

²⁴⁵ Sands (2003), p.38.

²⁴⁶ Stockholm Declaration, Principle 22.

²⁴⁷ The World Heritage Committee maintains a World Heritage List of cultural heritage and natural heritage properties with ‘outstanding universal value’, which are subject to special protections during times of armed conflict; Bothe et. al. (2010), p.582.

²⁴⁸ United Nations Convention on the Law of the Sea (UNCLOS), 10 December 1982, 1833 UNTS 3; Sands (2003), p.41. Under article 192 and 194 of UNCLOS, State Parties are required ‘to protect and preserve the marine environment’, and must take measures to prevent, reduce, and control marine pollution.

²⁴⁹ Sands (2003), p.42.

²⁵⁰ Sands (2003), pp.42-43.

²⁵¹ The United Nations Conference on the Environment and Development (UNCED) saw three non-binding instruments adopted: the Rio Declaration on Environment and Development (the Rio Declaration); a Non-Legally Binding Authoritative Statement of Principles for a Global Consensus on the Management, Conservation and Sustainable Development of All Types of Forest (the UNCED Forest Principles); and Agenda 21. At the conference, two treaties were opened for signature: the Convention on Biological Diversity; and the UN Framework Convention on Climate Change; Sands (2003), p.53. See also Marie G. Jacobsson, “Protection of the environment in relation to armed conflicts”, Annex E of Report of International Law Commission Sixty-Third Session, General Assembly Official Records, 66th Session Supplement No. 10 (A/66/10) (2011) (“Jacobsson (2011)”), paras.10-13.

²⁵² Sands (2003), pp.54.

development”, and notes that they are “entitled to a healthy and productive life in harmony with nature”. Significantly, principle 24 states that: ‘Warfare is inherently destructive of sustainable development. States shall therefore respect international law providing protection for the environment in times of armed conflict and cooperate in its further development, as necessary’.²⁵³ Other articles of the Rio Declaration repeat in part the ideals of the Stockholm Declaration, while linking these environmental obligations to the right to sustainable development. Significantly, the Rio Declaration reflects the ‘precautionary approach’ in Principle 15, and the polluter-pays principle (implicitly) in Principle 16.²⁵⁴

Following the 1992 UNCED, there have been many environmental treaties adopted, and many acts of international organizations directed towards the conservation of the environment. Most recently, huge political effort has been directed towards achieving a comprehensive climate change agreement, which was eventually managed in the form of the Paris Pact.²⁵⁵ The United Nations Millennium Development Goals and Sustainable Development Goals have a major focus on environmental protection, alongside development and poverty reduction.²⁵⁶

International environmental agreements have proliferated in recent decades, seeking to address in particular carbon emissions, deforestation and other grave threats to the environment. Over 900 international treaties, applicable in times of war and peace, exist with environmental provisions in them.²⁵⁷ However, most of these could not be used to directly prosecute crimes against the environment under international law *per se* as they do not incorporate individual criminal responsibility at the international level, and there is no international environmental court with jurisdiction to prosecute individuals for these activities. Instead, this body of law provides interpretive guidance when determining the

²⁵³ Rio Declaration, Principle 24.

²⁵⁴ Sands (2003), pp.56.

²⁵⁵ Note that the current President of the United States has signalled his desire to withdraw from the Paris Pact, but this will not be effective for several years; Valerie Volcovici, “U.S. submits formal notice of withdrawal from Paris climate pact”, Reuters, 4 August 2017, (<https://www.reuters.com/article/us-un-climate-usa-paris/u-s-submits-formal-notice-of-withdrawal-from-paris-climate-pact-idUSKBN1AK2FM>) (last checked 25 December 2017).

²⁵⁶ See, *e.g.*, the Sustainable Development Goals, which set the global agenda in the lead up to 2030, and many of which directly or indirectly concern environmental protection; *e.g.* Goal 6 (clean water and sanitation); Goal 7 (affordable and clean energy); Goal 11 (sustainable cities and communities); Goal 12 (responsible consumption and production); Goal 13 (climate action); Goal 14 (life below water); Goal 15 (life on land).

²⁵⁷ See Jensen (2005), p.155. See also Drumbl 1998-1999, p.139; Wattad 2009, p.280; Schwabach 2004, p.5, 13, 14-15. Byung-Sun Cho claims that the “vast majority” of the environmental treaties implicitly recognise the penal nature of the act by imposing duties to prohibit, prevent, prosecute or punish; Byung-Sun Cho, “Emergence of an International Environmental Criminal Law?”, 19 *UCLA J. Envtl. L. & Pol’y* (2001), p.17-18. *Contra* Schmitt (1997), p.50.

applicability of the existing prohibitions under the Rome Statute, particularly in delineating lawful from unlawful conduct *vis-à-vis* the environment.²⁵⁸

(b) Development of International Criminal Law addressing Environmental Harm

There is a long history of environmental damage during armed conflict, both as a deliberate tactic of war and as an off-shoot of lawful military operations, as well as during times of social upheaval.²⁵⁹ According to the Book of Kings in the Old Testament of the Bible, during the Ninth Century Before Christ, the Israelites engaged in tactics of altering the local environment in an attack against the Moabites.²⁶⁰ Likewise, the prohibition of environmental damage has a long pedigree. Restrictions on harming the natural environment were set out in the Old Testament.²⁶¹ Similarly, Muhammad's companion, the first Caliph Abu Bakr, is said to have instructed his Muslim army to avoid burning or harming trees in the Seventh Century Anno Domini.²⁶²

Despite these early developments and examples of environmental harm being used as a tactic of war, international laws concerning environmental damage have been slow to develop. It was not until war broke out in Vietnam in the 1960s, that a greater awareness of the need to collectively take measures to protect the environment emerged, particular during times of armed conflict.²⁶³ This fed the impetus for the development of treaties specifically protecting the environment, particularly under the rubric of international humanitarian law, and included calls for the fifth Geneva Convention on the protection of the environment.

The term ecocide was first widely used by a plant biologist, Arthur Galston, to encapsulate what he described as 'willful, permanent destruction of environments in which people can live

²⁵⁸ Peacetime environmental law remains effective during times of armed conflict to extent that it is compatible with international humanitarian law; International Law Commission, Draft Articles on the Effects of Armed Conflicts on Treaties (2011), Annex - Indicative list of treaties referred to in article 7. See also Louise Doswald Beck "Le droit international humanitaire et l'avis consultatif de la Cour internationale de Justice sur la licéité de la menace ou de l'emploi d'armes nucléaires" (1997) 823 RICR 37; *cited in* Schmitt (1997), p.32, 37.

²⁵⁹ Weinstein (2005), p.700.

²⁶⁰ See Bible: Revised Standard Version, 2 Kings 3:24-25.

²⁶¹ Bible: Revised Standard Version, Deuteronomy 20:19 ("[i]f you besiege a town for a long time, making war against it in order to take it, you must not destroy its trees by wielding an axe against them. Although you may take food from them, you must not cut them down. Are trees in the field human beings that they should come under siege from you?"). See also Cohan (2002), p.500.

²⁶² See Aboul-Enein, H. Yousuf and Zuhur, Sherifa, *Islamic Rulings on Warfare*, Strategic Studies Institute, US Army War College (Diane Publishing Co.: Darby Pennsylvania, 2004), p.22 ("Stop, O people, that I may give you ten rules for your guidance in the battlefield. Do not commit treachery or deviate from the right path. You must not mutilate dead bodies. Neither kill a child, nor a woman, nor an aged man. Bring no harm to the trees, nor burn them with fire, especially those which are fruitful. Slay not any of the enemy's flock, save for your food. You are likely to pass by people who have devoted their lives to monastic services; leave them alone.")

²⁶³ Jacobsson (2011), para.6.

in a manner of their choosing'.²⁶⁴ Galston and others condemned the American operations in Vietnam, particularly Operation Ranch Hand, and sought to enshrine a prohibition against serious harm to the environment in the same way that genocide was prohibited by Convention after World War Two.²⁶⁵ In 1973, Richard Falk sought the enactment of an International Convention on the Crime of Ecocide and a Draft Protocol on Environmental Warfare.²⁶⁶ He defined ecocide as 'acts committed with intent to destroy, in whole or in part, a human ecosystem', committed in peacetime or wartime,²⁶⁷ and suggested that conducting warfare in an environmentally deleterious way, such as through the use of chemicals, bulldozers, bombs, be prohibited in the Draft Protocol on Environmental Warfare.

Partly as a result of the events in Vietnam, the abstract ideals concerning environmental protection set forth in the Stockholm Declaration from 1972 were thereafter codified into specific prohibitions of international humanitarian law, which hitherto had featured prohibitions on certain means and methods of war in The Hague Regulations, but no prohibitions specifically protecting the environment. Most prominent were articles 35(3) and 55(1) of the 1977 Additional Protocols to the Geneva Conventions and the Convention on the Prohibition of Military or Any Hostile Use of Environmental Modification Techniques (ENMOD).²⁶⁸ These prohibitions would provide the basis for the subsequent introduction of provisions of international criminal law penalising destruction of the environment.²⁶⁹

The issue of environmental destruction and the need to protect the environment during armed conflict was brought to the forefront of international consciousness in 1990-1991, when Saddam Hussein set fire to Kuwaiti oil wells.²⁷⁰ The UN Secretary-General issued reports on the protection of the environment in times of armed conflict in 1992 and 1993,²⁷¹ and the ICRC issued a report on the same subject in 1994.²⁷²

²⁶⁴ David Zierler, *Invention of Ecocide: Agent Orange, Vietnam, and the Scientists Who Changed the Way We Think About the Environment* (University of Georgia Press 2011), at 15.

²⁶⁵ Bronwyn Leebaw, 'Scorched Earth: Environmental War Crimes and International Justice', 12(4) *Perspectives on Politics* (2014) 770, at 777.

²⁶⁶ Richard Falk, 'Environmental Warfare and Ecocide: Facts, Appraisal and Proposals', 4(1) *Bulletin of Peace Proposals* (1973), ("Falk (1973)"), p.80.

²⁶⁷ Falk (1973), p.93.

²⁶⁸ See *infra* Chapter 2(D)(i)(a) (describing elements of articles 35 and 55 of AP1 in relation to article 8(2)(b)(iv) of the Rome Statute).

²⁶⁹ Bothe et. al. (2010), pp.572-573.

²⁷⁰ Secretary-General Report 1993, p.11.

²⁷¹ Secretary-General Report 1993.

²⁷² ICRC Guidelines for military manuals and instructions on the protection of the environment in times of armed conflict (1994) (30 April 1996 Article, International Review of the Red Cross, No. 311).

The possibility of international prosecutions for serious atrocity crimes, which had been dormant since the post-World War Two trials, became a reality with the creation of the modern international and hybrid courts in the 1990s and beyond. In 1993, the International Criminal Tribunal for the former Yugoslavia (ICTY) was established, with jurisdiction over genocide, crimes against humanity, and war crimes, the latter of which was broadly framed and could potentially encompass serious environmental harm caused during armed conflict. The International Criminal Tribunal for Rwanda (ICTR), set up in 1994, had essentially the same substantive jurisdiction. Whereas other international or quasi-international courts were set up for countries including Sierra Leone, Cambodia, Lebanon, and East Timor,²⁷³ the most significant development was the creation of the Rome Statute of the ICC in 1998, which entered into force in 2002.²⁷⁴ The Rome Statute has a provision that specifically refers to harm to the environment (the war crime in article 8(2)(b)(iv)),²⁷⁵ along with several provisions that could indirectly address destruction of the environment.²⁷⁶

Despite the well-known examples of environmental damage during times of armed conflicts and in weak regulatory contexts, there has not yet been any conviction for environmental crimes (meaning eco-centrally framed crimes) before an international tribunal.²⁷⁷ Although the crime of causing environmental harm during armed conflict was not explicitly listed in the ICTY statute, it may have fallen under article 3 as a law or custom of war.²⁷⁸ However, aside from the ICTY Office of the Prosecutor's examination of the potential liability of NATO personnel in connection with the 1999 bombing of Serbian sites, and the ICC's occasional reference to environmental implications, there have been no cases concentrating on charges of environmental harm under modern international criminal law, and the ICTY Office of the

²⁷³ The prohibition on military attacks causing excessive environmental harm under article 8(2)(b)(iv) of the Rome Statute is partly reflected in regulation 6(1)(b)(iv) of the provisions governing the work of the East Timor tribunals. United Nations Transitional Authority for East Timor Regulation No. 2000/15 establishes panels with exclusive jurisdiction over serious criminal offences, including war crimes. According to Section 6(1)(b)(iv), "[i]ntentionally launching an attack in the knowledge that such attack will cause ... widespread, long-term and severe damage to the natural environment which would be clearly excessive in relation to the concrete and direct overall military advantage anticipated" constitutes a war crime in international armed conflicts.

²⁷⁴ The Rome Statute was signed in 1998 but only entered into force after the instruments of ratification, acceptance, approval or accession of 60 States had been submitted to the Secretary-General; in accordance with Article 126 of the Statute.

²⁷⁵ The war crime set out in article 8(2)(b)(iv).

²⁷⁶ See *infra* Chapter II(C).

²⁷⁷ Weinstein (2005), p.698; Stephens (2009), p.55; UNEP Study (2009), p.24.

²⁷⁸ ICTY Statute, article 3.

Prosecutor questioned whether the international humanitarian law prohibitions against excessive environmental harm would even apply before the Tribunal.²⁷⁹

The Iraqi Special Tribunal has jurisdiction over crimes of serious environmental harm but has not undertaken prosecutions for this provision.²⁸⁰ The remaining major international tribunals (the ECCC, STL and SCSL) would not appear to have direct jurisdiction over crimes of serious environmental harm and so unsurprisingly have not undertaken prosecutions for these offences.²⁸¹

The lack of provisions and prosecutions for environmental harm before the international criminal tribunals indicates the embryonic nature of the prosecution of environmental harm under international criminal law.

²⁷⁹ Final Report on NATO (2000), para.15 (“Consequently, it would appear extremely difficult to develop a prima facie case upon the basis of these provisions, even assuming they were applicable.”).

²⁸⁰ Statute of the Iraqi Special Tribunal, Article 13(b)(5) (“Intentionally launching an attack in the knowledge that such attack will cause widespread, long-term and severe damage to the natural environment which would be clearly excessive in relation to the concrete and direct overall military advantage anticipated”); Weinstein (2005), p.705.

²⁸¹ See Statute of Special Court for Sierra Leone, Article 4 (limiting other war crimes to those enumerated); Law of the Extraordinary Criminal Chambers of Cambodia (only including grave breaches of the Geneva Conventions in its jurisdiction); Statute of the Special Tribunal for Lebanon, Article 2 (limiting crimes in the jurisdiction to terrorism and life and personal integrity).